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Homewood Museum
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ONTARIO 2001

ANNUAL ARCHAEOLOGICAL REPORT, ONTARIO

Volume 12 (New Series) 2001

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Excavations under way at at Homewood in Leeds-Grenville. Illustration provided by Dena Doroszenko, Ontario Heritage Foundation.

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ANNUAL ARCHAEOLOGICAL REPORT, ONTARIO

VOLUME 12 (NEW SERIES) 2001

Editorial Committee:
Dena Doroszenko
Mima Kapches
Ellen Blaubergs
Rob Pihl

The Ontario Heritage Foundation seeks to preserve, protect and promote Ontario's archaeological, architectural, cultural, historical and natural heritage for the benefit and enjoyment of present and future generations of Canadians.

A not-for-profit agency of the Government of Ontario, the Ontario Heritage Foundation was established by the Province of Ontario in 1968 and operates under the Ontario Heritage Act.

These abstracts will be of interest to those members of the general public who want to learn about the prehistoric and historic record of Ontario and will be a valuable reference tool to archaeologists as well as specialists in many other professions.

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FROM THE EDITORS

This issue is the twelfth volume of the Annual Archaeological Report, Ontario (AARO), a continuation, in a new form, of a series originally published by the provincial government between 1887 and 1928. This volume contains reports on archaeological work conducted in the Province of Ontario during 2000.

This volume is the first time that an Editorial Committee has come together to assist in the editing process. Gratitude is also extended to Dyan Laskin Grossman and Donna Poulidis for their assistance in proofreading this volume.

Dena Doroszenko
Mima Kapches
Ellen Blaubergs
Rob Pihl

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CONSULTING ACTIVITIES:

CATARAQUI ARCHAEOLOGICAL RESEARCH FOUNDATION: CONSULTING ACTIVITIES

SUSAN M. BAZELY

The Cataraqui Archaeological Research Foundation continued to fulfil its mandate in cultural resource management in 2000 through archaeological research and conservation by maintaining involvement in consulting in Ontario. In the year 2000, Foundation archaeologists and historical researchers were involved with assessment and mitigation projects in the immediate Kingston region. These included monitoring of a parking lot installation for the City of Kingston in the historic hamlet of Charlesville (Bazely 2000a), monitoring of communications installations at the Royal Military College of Canada (Bazely 2000b), testing and monitoring for the installation of a natural gas service for the Royal Military College of Canada (Williams 2001) and Stage 2 work in preparation for the re-interment of human remains at Belle Island in Kingston (Bazely 2001).

ROYAL MILITARY COLLEGE OF CANADA (BBGC - 43)

In the summer and fall of 2000, staff of the Cataraqui Archaeological Research Foundation carried out a Stage 2 archaeological assessment of a planned natural gas pipeline route extending from Canadian Forces Base Kingston (CFB) to the Royal Military College (RMC), Kingston. Stage 1 investigations carried out in the fall of 1999 (Mount McGovern 1999) highlighted a number of areas along the route which had high and moderate potential for prehistoric and historic archaeological resources. These included: the historic village of Barriefield; a possible cemetery site associated with the former settlement of Green Bay; the Royal Military College; the pre-landfill shoreline of Point Frederick; and the Royal Naval Dockyard.

Cataraqui Archaeological Research Foundation
370 King Street West
Kingston, ON K7L 2X4

STUDY AREA

The first portion consisted of all affected land north of County Road 2, including portions of RMC, CFB Kingston, and Barriefield Village. The village of Barriefield was originally associated with the Naval Dockyard on Point Frederick. A large number of early to mid 19th century buildings remain, and in the 1970s, it was recognized as a heritage conservation area. While the proposed route of the pipeline only skirted the eastern and southern edge of the village, it potentially ran close to the site of a former late 19th century homestead and a one-room schoolhouse. The former stood on Department of National Defence property just west of George Street and has since been moved to another spot in the village. The Barriefield Schoolhouse, built ca.1850, was still standing on the corner of Main and James Streets into the 1960s. To the west of this site, below the village, mid-19th century maps record the presence of a cemetery. This was located just south of the former community of Green Bay. A survey of 1829 records the cemetery on the northeast corner of the exercise grounds. Two slaughterhouses are also recorded on a plan of ca. 1816 (Figure 1). One, shown as the "new slaughter house" with its attendant buildings, was believed to be located close to the proposed pipe line route, in an area south of the present day HMCS Cataraqui.

The second portion concentrated on high potential areas south of County Road 2. This area lay completely within the main campus of RMC located on Point Frederick, a peninsula extending between the Great Cataraqui River on the west and Navy Bay on the east. Historically, the point was used as the Naval Dockyard from the end of the 18th century and from the end of the 19th century to the present as RMC. Little above ground evidence of the dockyard remains from the early dockyard period. Of significance here, is a potential early 19th century cemetery site; the former shoreline and inlet located north and east of the Commandant's House; an area near the Old Dockyard wall and gate; and an area east of the Stone Frigate dating to ca.1819-20, the oldest remaining building from the Dockyard period.

FINDINGS

North of County Road 2, archaeological features were minimal. With the exception of a possible late 19th century house foundation east of George Street and the disturbance of a corner of the foundation wall of the mid 19th century Barriefield Schoolhouse, no other resources were encountered. In the former case, no clear evidence of a foundation was discovered. Cultural activity was however indicated by the presence of ash pits and artifacts of later 19th century date. Local residents recall a house standing on that spot and note that it now stands elsewhere in the village. In the instance of the schoolhouse, the foundation stones are still visible through the sod. Both testing and monitoring unearthed ash and other refuse north of the foundation. As is evident in a photograph of ca.1910, two privies stood to the west and northwest of the structure, but the whole area has been substantially altered, filled and graded. A photograph of ca.1910 records the area in use as a golf course.

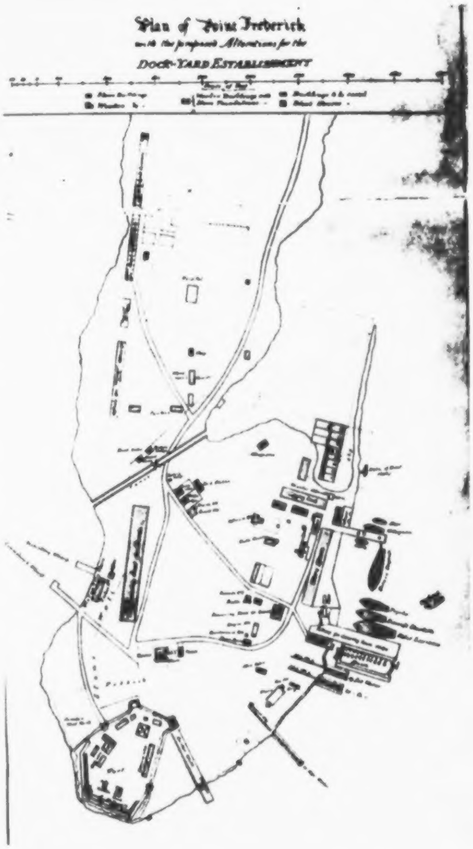


FIGURE 1. 1816 Plan (inset) NMC 11378.

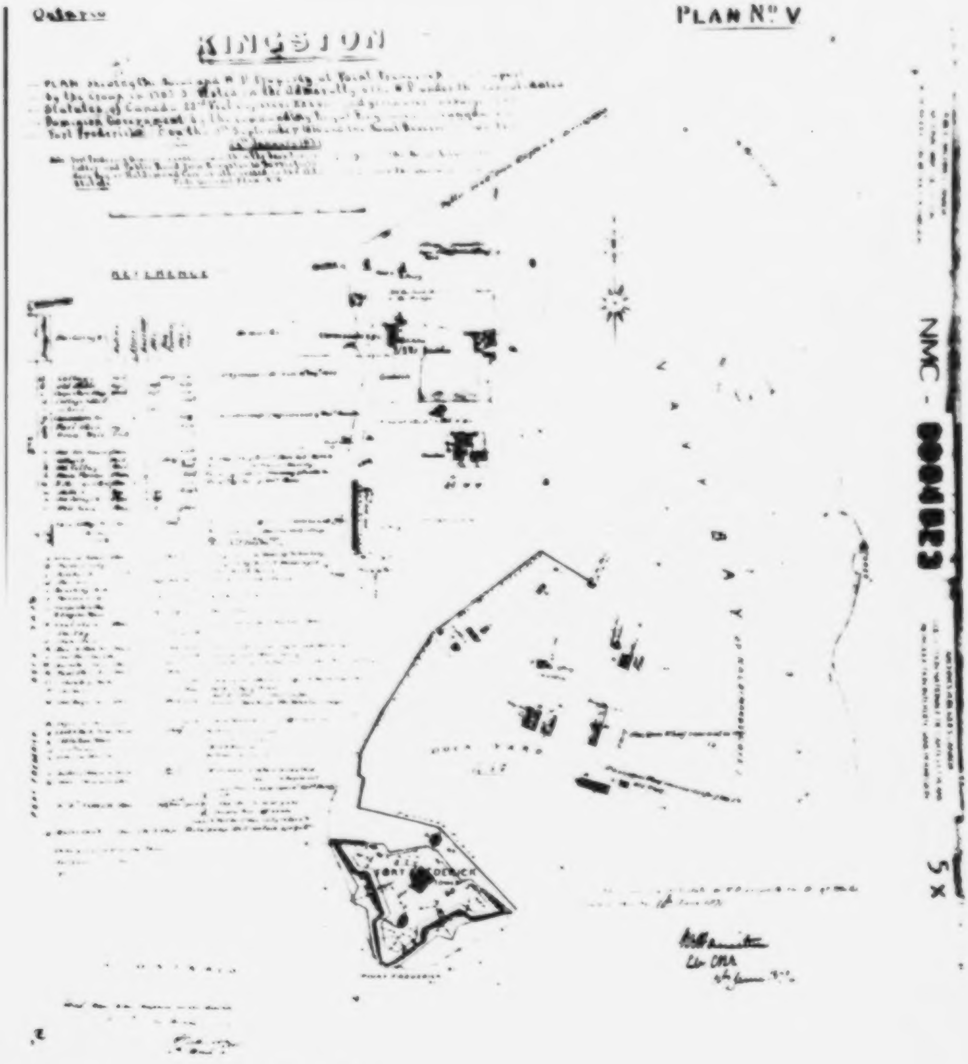
Testing and monitoring of trench excavation in the proposed vicinity of the Green Bay cemetery site produced no evidence of burial activity. The latter may have been located further to the east or, most likely, on the higher ground immediately north of the test area. Similarly, trenching near the potential 19th century slaughterhouse had negative results with the exception of three samples of butchered animal bone. It was in all likelihood originally situated much closer to the shore of the Cataraqui River.

South of County Road 2, testing and monitoring revealed ash deposits in the vicinity of Building #2. However, these appear to be areas of refuse dumping. Moreover, they had been substantially disturbed during previous excavations for services. Likewise, the gas pipe route immediately adjacent to the Married Quarters, Building #9, ran up against disturbance caused by the excavation of a trench for electrical services. South of Building #9, testing and monitoring failed to uncover evidence of prehistoric or historic activity. This stretch between Buildings #45 and #48 was considered to lie close to the pre-landfill shoreline. If earlier resources exist in this area, however, they may well lie below the depth of the trench excavation.

Monitoring revealed a number of features of archaeological interest within the bounds of the old Dockyard. Of most significance was a portion of a foundation wall discovered under the road surface at the corner of Valour Drive and General Crerar Drive off the northeastern corner of the Parade Square, north- northwest of the Stone Frigate, and adjacent to a retaining wall. The nature of this discovery is unclear. Moreover, the mechanical excavations only revealed a very small portion of the foundation. What was revealed appears to be a building foundation wall. The association of brick and other building destruction debris with this feature would seem to confirm this. Two separate 1816 plans of Point Frederick and the Dockyard show a number of small buildings in the vicinity of this foundation. Many of these structures occupied space now taken up by the Parade Square and the Stone Frigate (not completed until ca.1820). The function of these buildings is unclear, although they would appear to consist of various offices, store houses and sheds. An 1833 drawing of Point Frederick, from Fort Henry Heights, also shows quite substantial buildings to the northwest of the Stone Frigate. Again it is unclear what function these served. By the mid-19th century, following the closing of the Naval Dockyard, these structures were no longer in existence, as is evident in an image of 1855 and an 1869 fortification survey.

Also associated with this area were a series of wharves and slips. It is unclear whether these were the source of the timbers discovered during trenching along General Crerar Crescent, east of the Stone Frigate. The pipeline route ran close to the former launching spot of HMS St. Lawrence, as is evident in an 1814 image of the launch, there was a tremendous amount of cribwork associated with the launch. However, there were a series of wharves and slips constructed in this spot through the course of the lifetime of the dockyard. While there was a decline in activity and a reduction in facilities following the closure of the Dockyard in 1853, wharves were maintained into the latter part of the 19th century and indeed newer slips and wharves remain today. The St. Lawrence Wharf stands close to, if not in the same place, as the earlier wharf shown in drawings of the mid 19th century. What facilities remained following the demise of the dockyards, were simply associated with the stores. A plan of Naval and War Department property in 1870 (Figure 2) refers to the wharf directly east of the Stone Frigate as the 'Storehouse Wharf'. It also notes that it had been "renewed in 1861". Similarly, the 'St. Lawrence Wharf' is said to have been refurbished in 1865.

On the other side of the Dockyard, a stone wall originally ran around the western and northern sections of the property. The 1870 plan also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FORT FREDERICK
DOCK YARD

FIGURE 2. 1870 Plan NMC 4023.

shows this wall with the descriptor 'dilapidated'. It is possible that this is the same wall encountered during excavations southwest of Building #13 (Figure 3).

It is evident from early maps of this portion of the Dockyard that the line of the wall originally continued in a north-easterly direction beyond its present course. There was no evidence of the continuation of this wall in the northern trench profile, however, and it would therefore appear that this had been previously disturbed during other work in the area. In all probability, the

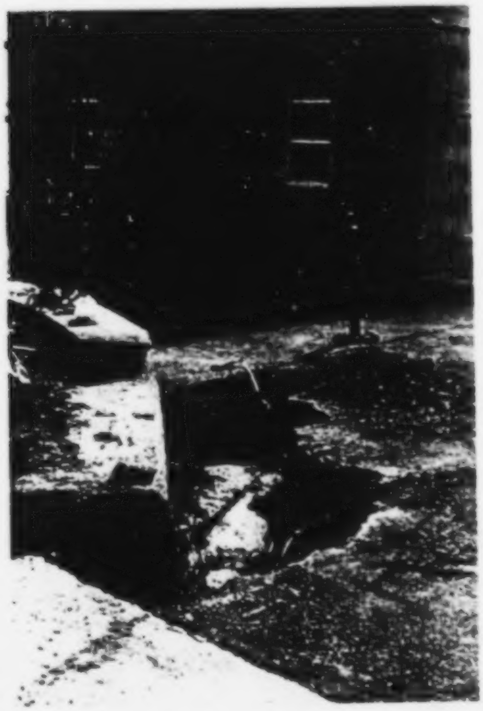

FIGURE 3. Wall feature near Stone Frigate, RMC Kingston.

wall would have carried on where Building #13 now stands.

Finally, monitoring in the stretch of pipe trench which ran south along the present stone wall failed to reveal anything in the way of cultural features. Nevertheless, what appears to have been charred wood was encountered at the bottom of the excavation trench. There was no coherence to these remains and they were fragmentary. Some activity is recorded in this area in 1816. A careening shed and wharves are located near the old dockyard wall. We may only speculate upon whether the remains discovered were associated with these structures.

BELLE ISLAND (BbGc-6)

The disinterment of human remains on Belle Island in 1988 and 1989 led to a co-operative effort between First Nations, the City of Kingston, the Ontario Ministry of Culture, Cemeteries Branch of the Ontario Ministry of Consumer and Commercial Relations, and the Cataraqui Archaeological Research Foundation to re-inter the individuals in December 2000. The work associated with the re-interment required a Stage 2 Archaeological Assessment.

After reviewing previous archaeological work conducted on Belle Island (Stewart et al 1989; Keatley & Desjardins 1990), discussions were held between representatives of First Nations, archaeologists from the Cataraqui Archaeological Research Foundation and the Ontario Ministry of Culture to identify suitable locations for reinterment of the human remains.

Three potential areas were identified for testing. These were selected for the purpose of reinterment based on closest possible proximity to the original site, distance from the eroding shore and possibility of greater soil depth. The main aim was to identify a location for reinterment that would not impact any other human remains or significant cultural material, provide sufficient soil depth, and that could provide for future reinterments if necessary. If any of these criteria were not met for the first area of choice, the second and then third would be assessed.

An attempt was made to follow the provenience system set up by previous archaeological investigation, but the Parks Canada system of operation and sub-operation was utilised. The area was designated as Operation 3 and the three specific locations for investigation as sub-operations 3A, 3B and 3C. Sub-operation 3A was a 2 x 2 m unit located immediately southwest of previously discovered burial number 4 and to the east of a gravelled area. Sub-operation 3B, a 2 x 2 m unit was located south of and adjacent to 3A. Sub-operation 3C, also measuring 2 x 2 m, was

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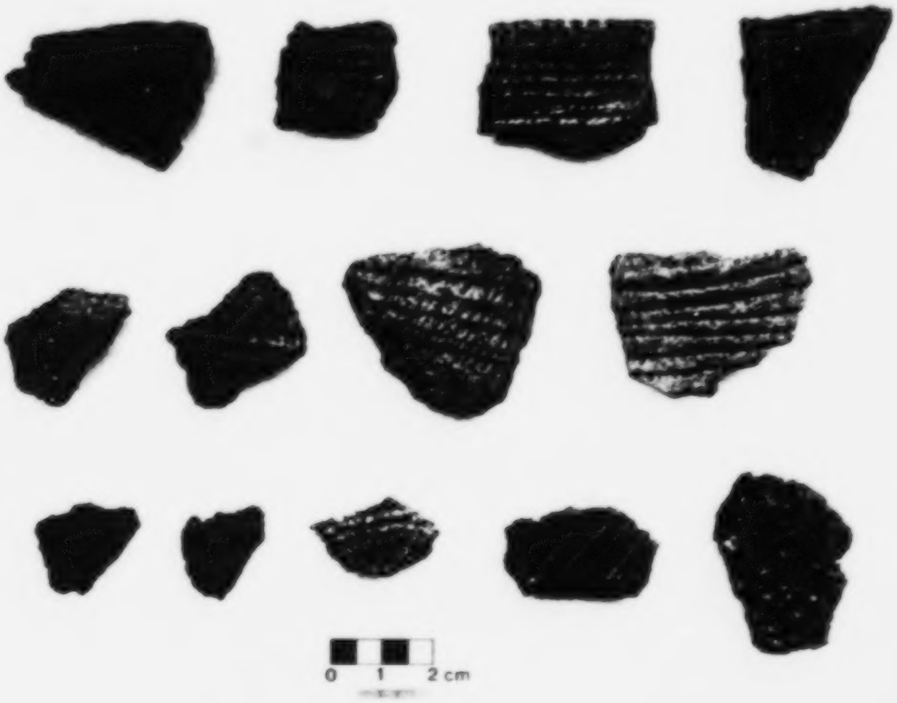

FIGURE 4. Decorated rim and body sherds of Middle Woodland pottery from 3B.

located further to the southwest. Fieldwork was conducted between November 23rd and December 4th, 2000. Only sub-operations 3A and 3B were investigated and 3B was selected for the reinterment. It was therefore not necessary to excavate sub-operation 3C.

In general the material recovered during this assessment ranged from recent plastic, glass and metal in the form of pop and beer bottle fragments, pull tabs and bottle caps to Middle Woodland pottery (0 - A.D. 500) and associated chert flakes (Figures 4 and 5). Other material such as animal bone is also attributed to this period. There was, however, a fairly large artifact count of almost 800 for a relatively small area of investigation. No occupation features or additional human burials were encountered in the two sub-operations that were investigated. While this work determined that there are no additional human remains in the area of re-interment, and the potential for both prehistoric and historic archaeological resources remains high, it did not confirm that adjacent areas are free of cultural features, material or burials.

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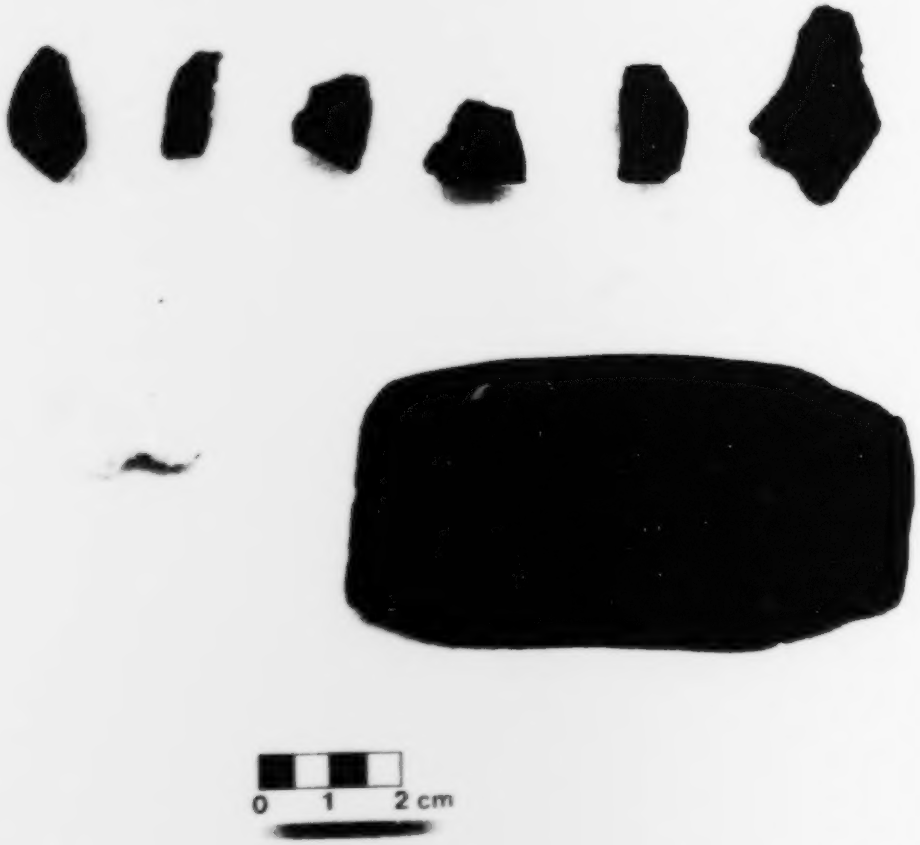

FIGURE 5. Chert flakes, quartz scraper and ground stone chisel from 3B.

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THE ARCHAEOLOGICAL RESOURCE MANAGEMENT PROGRAM OF THE TORONTO AND REGION CONSERVATION AUTHORITY: 2000 FIELD SEASON

ALISTAIR JOLLY AND ROBERT W.C. BURGAR

In accordance with Toronto and Region Conservation Authority (TRCA) practice, the 35,000 acres of land owned by the TRCA is subject to archaeological investigation by the Authority's Archaeological Resource Management Unit prior to the commencement of development projects. The objectives of such an assessment are to determine the presence and value of any cultural resources and to remove any artifacts for analysis.

FIELD SURVEY

Fourteen surveys were conducted in the year 2000 on approximately 26.1 acres of TRCA land. Two surveys were conducted in the Town of Caledon, four in the City of Vaughan, a single visual survey in the Town of Markham, four in the City of Brampton, one survey each in East and North York and one in Pickering. Of these, two yielded cultural material.

Sixteen artifacts were discovered at the Kortright Centre for Conservation in Vaughan. Surface finds included several chert flakes and a kaolin pipe stem with additional flakes and a single denticulate located in 21 one metre square test units. This site has been registered with the Ministry of Culture as AkGv-177.

The second site was found within the Claireville Conservation Area. Eighty-two artifacts were recovered, representing an assemblage of historic Euro-Canadian material. The material recovered was primarily glazed ceramic fragments with several clay tobacco pipes, calcined fragments of mammalian bone and a single isolated unworked Onondaga chert flake.

THE ALTONA FOREST SITE (ALGs-24)

The Altona Forest site was first discovered in 1999 when 75 mid 19th century artifacts were located. The site is situated at the eastern edge of the Altona Forest, on Lot 31, Concession 1, Pickering Township, Durham Region. Found on the west side of Rosebank Road, between Finch Avenue to the north and Amberlea Road to the south, it sits on tableland near the divide of the Petticoat Creek and the Duffins Creek watersheds.

The excavation of one metre square test units began in the estimated centre of the artifact concentration and extended to the north and south in order to define the site limits. The northern boundary of the site was demarcated by a dense concentration of tree stumps as well as large piles of rocks. The southern boundary was defined by modern hydro and water line disturbances. In total, 35 units were excavated, and all but one of the units were positive. A total of 2,931 artifacts typical of mid-19th cen-

Toronto and Region Conservation Authority
5 Shoreham Drive
Downsview ON M3N 1S4

tury Euro-Canadian material were recovered, not including a single flake of Onondaga chert.

The majority of the artifacts consisted of ceramic pottery sherds (Figure 1). The absence of maker's marks and the highly fragmented nature of the majority of these artifacts limit the amount of information that may be provided. As there was no porcelain such as 'bone china' identified in the assemblage, the ceramics suggest that the associated household was one of low to middle socio-economic status. The styles of transfer printed whiteware that have been identified in the assemblage were produced in the 1820's through to approximately 1860.

Fifty-four fragments of clay tobacco pipe were recovered, of which one bowl was complete. While several bowl fragments exhibit decorations such as leaf (floral) or parallel line motifs, only four bear maker's marks.

A total of 286 metal artifacts were recovered during the excavation. Of this, 202 were square headed nails. The remaining metal artifacts were generally modern in nature or unidentifiable.

Two hundred and twenty nine glass fragments were found at the Altona Forest site, a number that includes both modern and 19th century material. By far, the largest amount of glass material found was modern in nature. Of the historic material, 33 bottle glass fragments were recovered and all were characteristic of the 19th century, displaying a lower level of manufacturing skill with the appearance of being hand blown as one unit. These bottle fragments were organized using physical characteristics to determine a likely representation of five 19th century bottles. Six miscellaneous glass fragments were also found that had been altered severely by heat and could not be temporally situated.

Faunal material can be subdivided into 328 unworked specimens and nine worked artifacts. The latter are finished personal items in the form of clothing buttons made from both shell and mammalian flat bones.

The single lithic is a small spokeshave with a concavity 2.8 mm in depth along one margin and use-wear in the form of polish on all its surfaces. This artifact is being considered a separate deposition from the remainder of the material and an isolated find.

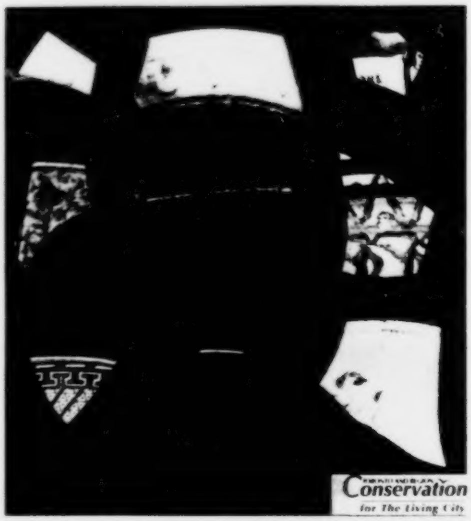

FIGURE 1. Ceramics from the Altona Forest site.

Two cultural features were also located. Feature #3, was an ovoid-shaped black and ash filled pit of unknown historic function. It contained 55 ceramic pottery and pipe fragments, faunal remains, and metal and glass artifacts. Feature #11 was an ovoid-shaped historic pit that was filled with ash, red and black soil. In cross-section, the red soil extended to a depth of approximately 3 cm below the subsoil surface. No artifacts were recovered from this feature, however the red soil is hearth-like, which may have originated from a nearby temporary cooking area.

Approximately three metres of piled stones were exposed during the excavation of the north end of the site. These stones were piled two to three layers deep and the same in width and placed just a few metres from the road. The arrangement of these large stones is suggestive of the stone piles which often encircled farmer's fields in the past. A continuation of these piles was observed at ground-level farther north along the original survey route.

The excavation at the Altona Forest site suggested the presence of a mid-19th century domestic farmstead belonging to a single-family of low to middle socioeconomic status. The well-mixed and fragmentary nature of the artifacts is suggestive of a domestic garbage deposit of an unknown time period. Historic documents for this area indicate that the Dixon family owned this lot and the adjacent lot to the north from 1849 until at least 1877.

THE MONSHEEN SITE

As a result of the widening of Islington Avenue and realignment of Monsheen Drive, an archaeological assessment of the project area was conducted in 1999. Twenty-one artifacts were recovered and this area was designated as the Monsheen site, dating to approximately AD 1450-1600. It is considered to be associated with the nearby Woodbridge-McKenzie site (AkGv-2), a Late Woodland village inhabited c. AD 1560.

The project involved land on Lot 6, Concession 7, City of Vaughan, in the town of Woodbridge to the northeast of the intersection of Islington Avenue and Highway 7. The area is referred to as Block B on Registered Plan 5081, City of Vaughan and is found on elevated tableland overlooking the Humber River. Artifactual material which defined the Monsheen site was recovered from the eastern half of the tableland and the adjoining slope on the eastern margin.

The land surrounding the Monsheen site has been subjected to activities relating to road and residential constructions, and portions of the site itself have been impacted by the installation of a natural gas line. Modern debris such as fence wire, asphalt and beer bottle glass was encountered. At the southern and eastern portions of the site, in which there was topsoil, artifacts were present.

Of the 104 one metre square test units that were excavated, 83 were positive, with a total of 643 artifacts recovered in an area measuring 25 metres by 12 metres.

Within the artifact sample, 95 are lithic, of which 11 may be classified as worked tools. This includes one flake scraper that exhibits evidence of heat treatment, six utilized flakes, three cores which exhibit one edge of visible cortex, and a Category 4 end scraper.

A total of 299 artifacts are ceramic in nature. This includes 281 bodysherds, 11 rimsherds and six smoking pipe fragments. The bodysherds are all typically Late Iroquoian in composition. Eight rimsherds were analyzable and, after vessel mending, this number was reduced to a minimum of seven vessels (Figure 2).

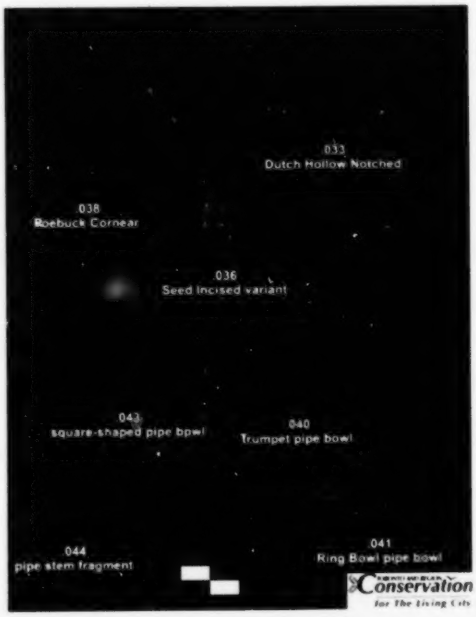

FIGURE 2. Selected artifacts from the Monsheen site.

Six smoking pipe fragments were recovered, three stem fragments and three bowl fragments. This includes a plain Trumpet pipe, a second bowl fragment decorated with horizontal incisings that may represent a Ring Bowl or a Collared pipe, and an undecorated fragment from a square-shaped bowl.

Faunal material comprises 38.1% of the artifacts recovered from the excavation. These artifacts are all unworked specimens consistent with a year-round Late Iroquoian settlement rather than an encampment designed to process one species of animal at a particularly abundant season of the year.

Following the manual excavation of the test units, the site area was stripped by Gradall in an attempt to salvage any settlement patterns that may have been present, despite the disturbance. The sole subsoil anomaly encountered was a disturbance created during the installation of a natural gas line through the mid-section of the project area. No cultural features or post moulds of Iroquoian origin were identified at the Monsheen site.

The excavation revealed the Monsheen site to be a heavily disturbed Late Woodland (AD 1450- 1600) artifact scatter. Unfortunately, the disturbance, which likely occurred during the construction of Monsheen Drive and the installation of a natural gas line, has made the interpretation of the site difficult.

It is not known whether the artifacts originated at this location and were subsequently disturbed, or whether they were introduced to this location when the topsoil from a nearby site was brought in for landscaping purposes. If the Monsheen artifacts represent the original location of a site, the majority of the site must have been destroyed by the construction of Monsheen Drive. If the Monsheen artifacts were deposited here during the landscaping of the immediate area, they may be remains from the nearby Woodbridge-McKenzie site (AkGv-2), located approximately 300-500 metres to the northeast. A comparison of rimsherds with those from the Woodbridge-McKenzie site show that each of the seven styles identified at the Monsheen site were among those included in the Woodbridge-McKenzie analyses. The Monsheen site seems to be a component of the Woodbridge-McKenzie site, either in the form of an external midden or as an artifact-bearing layer of topsoil that was transported during the construction of the subdivision.

2000 CONSULTING WORK IN ONTARIO

ROBERT "BUD" PARKER

Parker Archaeological Consulting has been conducting cultural resource management in Ontario since 1990. In 2000, six archaeological assessments were conducted in the Regional Municipality of Waterloo and the County of Wellington. Three of these projects are briefly discussed below.

The proposed Fox Run Estates subdivision (Phase 2) in the Township of Puslinch, County of Wellington was assessed in the summer of 2000. Investigation of the 15.0 ha property resulted in the recovery of three widely scattered late historic artifacts. These artifacts are probably associated with the 19th Century settlement and farming of these lands. The study area is accessed from Brock Road (County Road 46), an early thoroughfare between the cities of Hamilton and Guelph, just north of the Village of Aberfoyle.

In the late fall of 1999 and early spring of 2000, the proposed widening of Gordon Street (County Road 46) in the City of Guelph and the Township of Puslinch, County of Wellington, was archaeologically assessed. Although no new archaeological sites were identified, the 6.5-kilometer study area included 19th Century farms and small hamlets which are slowly being surrounded by new developments in the southern part of the City of Guelph.

The proposed widening of the Parkhill Road Bridge, in the City of Cambridge (Galt), in the Regional Municipality of Waterloo, was assessed in the fall of 2000. The Parkhill Road Bridge was first built around 1840, as part of the "Victoria" and/or "Dickson" Mill complex. Spring floods destroyed the original and subsequent bridges, until the current bridge was built in 1933. The bridge and surrounding lands have been largely disturbed by late 20th Century redevelopment and flood controls, however the modern and renovated buildings (including the proposed widened bridge) retain 19th century styles. The City of Cambridge is quite proud of its historic Grand River landscapes, and this and other projects along the river must preserve and/or compliment the built heritage of the area.

Parker Archaeological Consulting
28 - 279 Sandowne Drive
Waterloo, ON N2K 2C1

CONSULTING ACTIVITIES UNDERTAKEN IN 2000 BY THE LONDON MUSEUM OF ARCHAEOLOGY

ROBERT J. PEARCE

INTRODUCTION

During 2000 the Museum continued work on several projects initiated in earlier years, and completed a number of reviews and Stage 1 background studies. Archaeological fieldwork was completed on 22 projects in the municipalities of Brant, Halton, Middlesex, Peel and York. These projects included the survey of 151 ha of land to be developed as residential subdivisions or industrial parks. Thirty-eight prehistoric and/or historic archaeological sites were discovered or re-investigated.

Five of the projects undertaken in 2000 involved Stage 3 investigations at a total of 26 different sites. Some of these sites were simple lithic scatters which, upon Stage 3 testing, failed to yield any significant finds. However, important discoveries were made on the two projects featured below.

HAMPTON ESTATES SUBDIVISION, BRANTFORD

The Museum's initial discovery of three potentially significant sites (AgHb-238, 239 and 240) on this property was mentioned in last year's Annual Archaeological Report (Volume 11). Then it was noted that each site had yielded (through surface collection) small quantities of Haldimand chert tools (bifaces and scrapers) and detritus, suggesting perhaps that they were small camps or lithic workshops dating to the transitional Late Palaeo-Indian to Early Archaic period (Hi-Lo phase). Stage 3 investigations undertaken by the Museum in 2000 involved further controlled surface collection and the manual excavation of a limited number of one-metre squares at each site.

At the Blue Box site (AgHb-238) we had initially (1999) surface collected 19 artifacts. In 2000 we surface collected a further 48 lithic artifacts and excavated 16 squares, which yielded 4,146 artifacts. At the Snowhill site (AgHb-239) we had initially (1999) surface collected 42 artifacts. In 2000 we surface collected a further 172 artifacts and excavated 22 squares, which yielded 516 artifacts.

Surface collection of site AgHb-240 in 1999 had yielded 23 lithic artifacts from a 50 m by 25 m area. A second surface collection in 2000 produced evidence for two distinct clusters of artifacts separated by a sterile area a few metres wide, so the site was redefined as two separate components, 240a and 240b. At 240a we recovered only 17 artifacts randomly spread over a relatively large area measuring 30 m by 30 m. The recovery of 59 more artifacts from 17 squares excavated in that area led us to conclude this eastern component was not significant. At 240b we recovered 160 artifacts from a 20 m by 20 m area; most of those artifacts were situated within a smaller concentration measuring 5 m in diameter, just beyond the western

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London Museum of Archaeology
1600 Attawandaron Road
London, ON N6G 3M6

limit of the site as recorded in 1999. We then excavated 17 squares within the western area (now called the Double Take site) leading to the recovery of 1,299 artifacts.

At the two most prolific sites (Blue Box and Double Take), certain one-metre squares yielded hundreds of tertiary reduction and/or biface thinning flakes. Upon excavating one square, we observed that many tiny flakes were passing through the 6 mm (1/4") mesh screens we normally use. To offset this loss, we switched to 3 mm (1/8") mesh screens. We also re-collected the backdirt from some of the squares excavated with 6 mm mesh screen and took it back to the Museum in pails to be re-screened through finer mesh.

One particular one-metre square at the Blue Box site was especially noteworthy. First, sifting the plough-disturbed topsoil through 6 mm mesh had yielded over 300 lithic artifacts. We observed that there was a very noticeable concentration of small chert flakes in a 7 to 10 cm thick stratum at the plough-zone/subsoil interface. Continued excavation down into the top 10 to 20 cm of subsoil yielded many more flakes. We collected 50 litres of unscreened soil from the interface layer and subsoil and processed it at the Museum by water-screening it through fine-mesh screen. This sample of 50 litres yielded a remarkable number of flakes – 3,213 in total. We therefore collected most of the backdirt from the initial screening through 6 mm mesh and re-screened it through 3 mm mesh. The result of this combined strategy meant that we discovered 3,677 artifacts in this single one-metre square.

In marked contrast, a one-metre square immediately adjacent to the one just described yielded a mere 311 artifacts, while additional squares excavated at 5 metre intervals outward from those two, in all four directions, yielded 34, 29, 12 and 11 artifacts respectively. Beyond that, our one-metre squares had a paucity of yields at 1 to 15 artifacts per square.

Our initial conclusion regarding the Blue Box site was that we had come down onto an extremely rich subsurface feature, one for which there was no visible plan view outline. Some of the excavated squares at the Double Take site also had high yields, although not nearly as high as the one at Blue Box. The single most prolific square at Double Take yielded 436 artifacts; again, most of these came from a narrow band of soil at the plough-zone/subsoil interface suggesting at least one subsurface feature is present at this site also.

Blue Box and Double Take rank as the two "easiest" sites we have ever worked on: rock and pebble-free sandy loam over pure sand subsoil. If dry, the soil simply ran through the screen with minimal shaking; the length of time it took to excavate a square was dictated solely by the number of artifacts present.

The Snowhill site was somewhat different than the other two since it is situated on a lower terrace overlooking the Grand River; this terrace is strewn with rocks and pebbles of all sizes. Also, this site is spread over a much larger area: a main surface distribution of 50 m by 30 m but exceeding that greatly if one counts numerous "outliers" of isolated finds in the same field. The two most productive one-metre squares had just 181 and 75 artifacts, while the others yielded between 1 and 34 artifacts.

The artifact assemblages from all three sites are clearly dominated by chipping detritus (flakes and cores), virtually all of which is Haldimand chert. A majority of the lithic tools from all three sites are also made on that material, and include bifaces (predominantly Stage 1 and Stage 2 reduction) and scrapers. Some ground stone items were present at each site, including hammerstones, hammer/anvil stones and metates. The Snowhill site again exemplified a difference by yielding types of artifacts not yet found at the other two sites: two celts, one netsinker and, remarkably, two deer antler fragments. The latter were from a water-saturated square at the western periphery of the site and could possibly indicate that future excavations might uncover additional faunal material. Only two diagnostic points have been recovered to date at the three sites, one from Blue Box and the other from Snowhill. Both of these are definitive Early Archaic period "Nettling" points, and both are made on Onondaga chert.

The 2000 Stage 3 investigations confirmed all three sites are significant early components, tentatively assigned to the transitional Late Palaeo-Indian to Early Archaic stage of Ontario prehistory. Further excavations have been recommended for all three of these sites in 2001.

RIVER BEND SITE, LONDON

The River Bend Community Plan Area is a large block of land at the western edge of the City of London, extending both north and south of Commissioners Road at the west limit of the former community of Byron. The London Museum of Archaeology and others had previously conducted limited archaeological fieldwork in small segments of this area. This work resulted in the documentation of a few sites, but more extensive work was initiated in 1995 when the various landowners grouped together to devise a coherent community plan and seriously consider the submission of formal plans of subdivisions.

One such area was a 170.3 ha (420.8 acre) expanse of land primarily owned by Sifton Properties Limited (London) to be developed as "River Bend Phase A." This plan involved a 43.1 ha residential development and a 70.0 ha golf course, surrounded on two to three sides by a big loop in the Thames River; the 55.8 ha Kains Woods ESA (Environmentally Significant Area) also forms part of this property and is to be preserved.

In 1995 the Museum had initiated a formal Stage 2 assessment of segments of the land to be potentially impacted by future development, although at that time the nature and extent of the future development were unknown or on paper only as concepts. We documented numerous isolated findspots throughout the River Bend study area. We also discovered two potentially significant sites and a series of isolated finds within a single field of ploughed corn stubble towards the northeast corner of what would later become Sifton's proposed Phase A development area. At the time, we registered these two potentially significant sites as TGIF (AfHi-197) and Crop Circle (AfHi-198).

In 2000 Sifton Properties retained the Museum to complete the archaeological assessment of all lands within their River Bend Phase A development area. This included further Stage 2 fieldwork (surface survey and extensive test pitting of pasture and woodlot areas) plus Stage 3 investigations at not only the two previously identified potentially significant sites of TGIF and Crop Circle, but also at 12 so-called "isolated findspot" sites (some found in 1995, and new ones found in 2000).

Based on our 1995 fieldwork, Crop Circle was considered to be a massive lithic scatter covering the entire central portion of the field. The 71 lithic artifacts surface collected here in 1995 were spread over a large oval area measuring 285 m east-west by 150 m north-south. On the other hand, TGIF was considered to be an Iroquoian cabin site based on our recovery, from a 75 m by 50 m area, of a sample of 41 artifacts including decorated rim and neck sherds, plain ceramic body sherds, chert tools and debitage, ground stone tool fragments and faunal remains. Also in 1995 we observed on the ploughed surface of TGIF small areas of ash and charcoal, suggesting the presence of midden deposits or plough-disturbed subsurface features. There were no artifacts from a 50 m wide swath separating TGIF from Crop Circle, while other finds in this same field seemed too far removed from both TGIF and Crop Circle to be considered parts of those sites.

Our 2000 fieldwork demonstrated, however, that TGIF and Crop Circle, as well as two of the so-called findspots, were really all part of a single large Iroquoian village which we now call the River Bend site. Between May 8 and September 1, 2000 as the size and complexity of the site grew so did the extent of our fieldwork. In the end, we spent 56 days doing fieldwork on this site, with a fluctuating crew of two to nine people, not including the four Ministry of Culture interns who joined us for one week courtesy of Mr. Neal Ferris.

We started the 2000 field season here by establishing a grid and excavating one-metre squares in checkerboard patterns at TGIF, Crop Circle and the various findspot locations to the east and west of TGIF and Crop Circle. Due to the discoveries we made, we then extended a line of one-metre squares at 5 and/or 10 m intervals in a north-south row from Crop Circle to TGIF. Much to our surprise we discovered sufficient artifacts and subsurface features to then indicate these two sites were not really separate but part of one. Blocks of squares were manually excavated at various productive locations, including the exposure and excavation of subsurface features at what had been the central-east end of the former Crop Circle site and a portion of a longhouse filled with features at what had been the TGIF site. Considerable effort was then expended to fully uncover, map and record this longhouse and to fully excavate all of the features within it. Concurrently, we employed a backhoe with ditching bucket (no teeth) to mechanically strip the plough zone from a series of trenches in an attempt to ascertain more information about the site (i.e. uncover settlement pattern features and post moulds).

Throughout this process we were in constant communication with the developer. Once we had determined the limits of this large and significant site it was possible to overlay our site plan map onto a copy of the proposed development plan. From this, it was determined that the entire site fell within the confines of the golf course to be developed here. In conjunction with the developer's engineers and golf course consultants, it was relatively easy to make the decision to cap and preserve the site. We had to coax the developer to let us finish excavating the longhouse we had uncovered. Also, the Ministry of Culture insisted that we use the backhoe to excavate a 3 metre wide trench around the perimeter of the site as we had defined it, to make sure of its limits. Once that was done we staked out the site's perimeter and the developer's surveyors installed iron bars to facilitate the compilation of a legal survey plan, so the site area could be registered against title to the property to ensure the site's protection in perpetuity. When we finished excavating all of the longhouse features, all of our excavation units were backfilled, a geo-textile fibre was laid out and the entire site area was capped with 0.5 to 2.0 metres of clean fill. All irrigation and drainage pipes and electrical conduits were installed within the clean fill, a capping layer, and the golf course was constructed with no impact to the underlying site. Today, a golfer walking down the sixth fairway or lining up a putt on the eight green will not know he/she is standing on top of a fourteenth century archaeological site.

Our fieldwork at the River Bend site resulted in the recovery of over 40,000 artifacts, the vast majority of which came from the features and post moulds of the single longhouse we excavated. This house was 38 m long and 6.5 m wide. By Iroquoian standards the house was very "dirty," with well-defined interior support post moulds forming interior bench rows along either side, other support posts clustered in the center, interior isolated post moulds throughout, and 79 features in the central corridor and under the bench rows. There were four hearths, aligned down the centre row of the house and evenly spaced at 5 to 6 m intervals. There were various ash-filled pits and smaller pits with few artifacts, but there were also 21 refuse-filled storage pits packed with debris including large quantities of faunal remains. For example, two such features each contained in excess of 5,000 artifacts. The site is quite unique in that a majority of the faunal remains are large, extremely well preserved pieces. There is a dominance of deer in this assemblage, including complete long bones, large cranial segments and complete antlers. In addition, large quantities of fish remains were present.

The site assemblage includes 37 analyzable ceramic vessels (ten of which could be partially or totally reconstructed). The exterior motifs on these are clearly dominated by incised or trailed horizontal lines, and 35 of the 37 vessels are typed as "Ontario Horizontal". The exterior horizontal motifs occur by themselves on 11 vessels, but in conjunction with one or more rows of linear stamped obliques above and/or below the horizontals on 24 vessels. The 37 vessels have very high percentages of interior decoration, lip decoration, and castellations. The assemblage also includes over 200 fragmentary ceramic rim sherds, some of which have decorative motifs and techniques not observed on the sample of 37 analyzable vessels; significantly, some of these have horizontal motifs executed by push-pull.

Based on a variety of lines of evidence including the ceramics, lithics and other artifacts classes, the River Bend site is temporally assigned to the early Middleport substage of the Middle Ontario Iroquois stage.

CONSULTING ACTIVITIES OF WOODLAND HERITAGE SERVICES LIMITED IN NORTHERN ONTARIO

JOHN POLLOCK AND LUKE DALLA BONA

During 2000, John Pollock (Settlement Surveys Ltd.), together with Luke Dalla Bona (Pictographics Ltd.) formed a new archaeological consulting firm called Woodland Heritage Services Ltd. (www.woodlandheritage.com) incorporated in late 1999 with offices in New Liskeard and Sault Ste. Marie, Ontario. Regional associates were Ted Binguis at Thunder Bay and Mike O'Connor at Goulais River. Together the firms undertook over 60 projects during 2000 in the Sudbury, North Bay, Mattawa, Temagami, Lake Timiskaming, Sault Ste. Marie, Hearst and Severn River areas. Four staff members and one student were involved in these activities. One of the more interesting projects in the Berens River area of northwestern Ontario is described below.

STAGE 1 & 2 ARCHAEOLOGICAL AND HERITAGE IMPACT ASSESSMENT, AT OSHKISIKO PAWITIK (EYE FALLS) BERENS RIVER

This project involved an inventory and assessment of cultural heritage sites and features prior to the proposed development of the Hydroelectric Project at Eye Falls on the Berens River by the Poplar Hill First Nation. Archaeological fieldwork was undertaken by John Pollock and Luke Dalla Bona assisted by Robin Hughes and David Tarnoca. Many thanks to Chief Patrick Owen and Jim Suggashie, Deputy Chief for providing accommodations and helpful information.

OJ-CREE ARCHAEOLOGICAL HISTORY IN THE BERENS RIVER AREA

Other than the 2000 Woodland Heritage Services report, the only other archaeological field work in the Berens River study area was undertaken by John Pollock in 1997 at nearby Deer Lake (Settlement Surveys Ltd. 1997) and Mike McLeod at Poplar Hill during a 1992 assessment of MTO Remote Airport Site Developments (Settlement Surveys Ltd. 1993). This resulted in the registering of two sites. One was an isolated projectile point find (FaKn-1) on the expansion of the Poplar Hill airport runway. This 'find spot' was thoroughly investigated and no further artifacts or features were encountered. Another site was located outside the airport area at the Berens River bay shore near a tributary creek. It is called the Pickerel Portage site (FaKn-2).

The Poplar Hill Reserve (702 ha) is within the boundaries of the 1875 Winnipeg Treaty No. 5.

The Poplar Hill First Nation is located on the Berens River approximately 120 km north of Red Lake and is accessible by air and winter

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Woodland Heritage Services Ltd.
17 Wellington Street Box 2529
New Liskeard, ON P0J 1P0

road. In 1978 Poplar Hill separated from the Pikangikum Band (ONAS 1992:186). The On Reserve Population is approximately 400 people. The language in the community is Algonkian (Ojibway/ Oj-Cree).

Broadly referred to as the Northern Algonkian peoples, the Poplar Hill, Pikangikum, Deer Lake, Sandy Lake, North Caribou (Round) Lake, and Trout Lake Bands, among others, are considered the descendants of both Cree and Ojibway peoples.

According to James V. Wright, the Northern Algonkians of Ontario developed along similar cultural lines of groups in north-central Manitoba and Saskatchewan. Wright distinguishes the prehistoric peoples living in Northwestern Ontario from the Western Algonkians and the Eastern Algonkians by a unique Northern pottery tradition (consisting of a mixture of styles with Iroquoian elements) although stone and bone artifacts among the groups are generally very similar (1972a).

Ethnohistorians face several difficulties when attempting to identify various groups of Northern Algonkian-speaking peoples. For instance, Edward S. Rogers suggests that the Ojibway peoples "blended gradually into the Cree north of the Upper Great Lakes" whereas Charles Bishop delineates "a somewhat sharper ethnic and territorial boundary" (Bishop 1994:278). The term Ojibwa may have been used originally in reference to a single group of Native peoples but it now refers to a linguistic tradition and includes several groups with similar dialects (Bishop 1994:278).

Traditionally, the Cree peoples inhabited the Hudson Bay coast while the Ojibway inhabited the north shore of Lake Superior (Bishop 1994:279). The merging of these two cultural groups during the post-contact and fur trade eras formed the ancestral base for the emergence of the Poplar Hill First Nation and other Ojibway/Cree peoples.

Living for the most part in conical birch-bark lodges, the Northern Algonkian peoples maintained a subsistence lifestyle by hunting, fishing, and gathering berries (Bishop 1994:278,286). In the mid-eighteenth century, however, the Northern Algonkians trapped furs, mainly beaver, for trade at Hudson's Bay Company (HBC) posts. Moose and caribou represented their main food source during the winter months and clothes were made from the large hides (Bishop 1994:286).

There are recorded accounts from the HBC Company records that between 1720 and 1770, the Northern Cree began to migrate westward towards Manitoba:

> "The Indians who inhabit this part of the country belong to the extensive class of Southward or Kristenaux [Cree] Indians . . . it is probable that these tribes were formerly confined to the East side of Lake Winnipic, but from the diminution of animals, there appears to have been a general migration to the westward, one tribe displacing or rather driving back other tribes 'till at length a great part of the Indians once living on the east side of the Lake are now found westwards of it whilst the original inhabitants of the westward are driven still further into the interior." (Bishop 1994:284 quoting HBCA B 16/9/1).

Bishop further states "roving bands of Ojibwa from the southeast also began to occupy permanently the upper Albany River drainage area by at least the early 1730s" (1994:284). An HBC 1839 Martin Falls' post journal provides more data concerning the impact of the fur trade on Cree and Ojibway peoples:

> "The Greater number of families belonging to that tribe of Sauteaux [Ojibway] denominated the Suckers—

> a band of the Great Chippewa Divisions which appear to have pushed farthest to the northward at least in this quarter . . . They are known at York Factory and Severn as the Bungees, a name I imagine given to them from their use of the Sauteaux word Pungee—a little. To the northward they keep up an intercourse with the Severn Indians, to the eastward with those of Albany mixing and intermarrying which connections I may say have already produced Half Cree, Half Sauteaux Breed affecting the Language and Character in no slight degree." (Bishop 1994:284 quoting HBCA B 123/a/14)

Regarding linguistic affiliation, several Northern Algonkian Bands, like the Poplar Hill First Nation, identify themselves as both Cree and Ojibway. Very little information is available concerning the original language, or mother tongue, spoken by these Bands.

PROPOSED SMALL HYDRO DEVELOPMENT

The Keewaytinook -Okimakanak Tribal Council (Northern Chiefs) and the Poplar Hill First Nation wish to construct a run-of-the-river hydroelectric generating facility on the Berens River, approximately 8 km south of the remote community of Poplar Hill. Poplar Hill is located about 500 km northwest of Thunder Bay and is a First Nations community of 400 people.

The Eye Falls " Oshkisiko Pawitik" site (see Figure 1 and Figure 2) will be the location of a weir, a powerhouse intake structure and outlet channel. The powerhouse will be small and the project will not require a dam or a large head pond. Therefore, there will not be any flooding of the shoreline.

ARCHAEOLOGICAL FIELD WORK

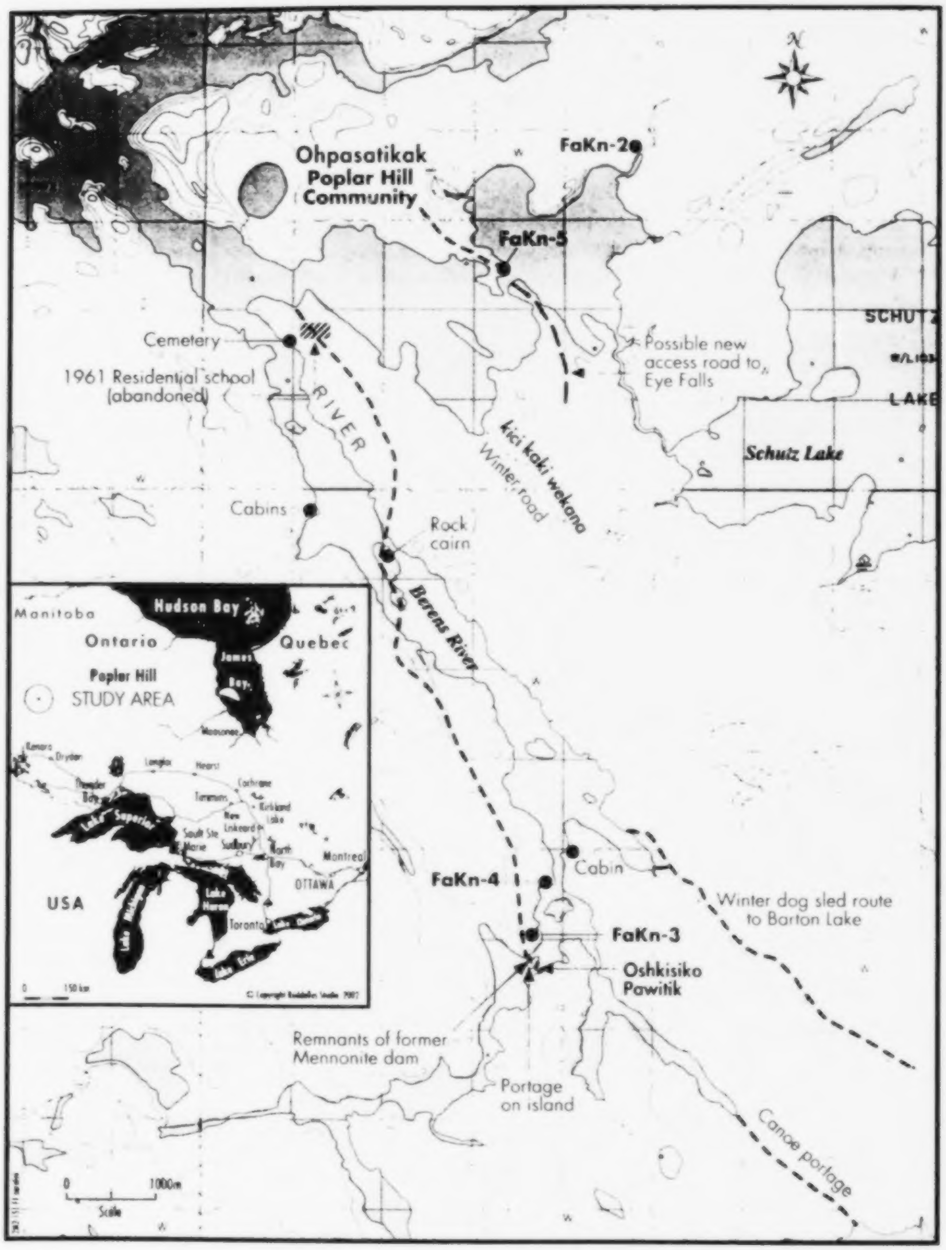
Dr John Pollock and fellow Woodland Heritage Services archaeologist Luke Dalla Bona assisted by Robin Hughes, completed the archaeological and cultural heritage impact assessment for the Berens River Hydroelectric Project at Eye Falls. Robin Hughes made the travel preparations for us and arranged for us to meet with Chief Patrick Owen, Deputy Chief Jim Suggashie and Band Council Members. We were also participants on a phone-in radio show hosted by Jim Suggashie during our stay in the community. At that time, we explained our project and answered questions from community members.

The archaeological field survey was an initial reconnaissance type archaeological survey undertaken as a Stage 1 and 2 project. The field assessment took place over a five-day period from July 6 to July 10, 2000 and concentrated on a general inspection of all potential impact areas of the proposed mini-hydroelectric generating site followed by subsurface testing. The subsurface testing involved .25 to .5 m^2 test pits dug by shovel and hand trowel. In this way, areas of high archaeological potential in the study area were examined and tested (see Figure 1). Representative artifact samples, photographs and sketch maps were made of all sites located.

The fieldwork resulted in the locating and documentation of three prehistoric archaeological sites, (see Figure 1) relating to early Poplar Hill First Nation use of the area, as listed below:

Site 1 - Eye Falls Fishing Campsite

FaKn-3 is a small precontact/prehistoric archaeological site on a flat rock camping area located on the west bank of the Berens River below Eye Falls. It consists of a one-metre high gently sloping rock terrace that has been used as a traditional camping spot for Poplar Hill Lake people when fishing below the falls. The shoreline at the site is formed of flat bedrock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FaKn-2
FaKn-5
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1961 Residential school
(abandoned)
RIVER
Possible new
access road to
Eye Falls
kici kaki wekana
Winter road
Schutz Lake
Cabins
Rock
cairn
Berens River
Manitoba
Hudson Bay
Ontario
Quebec
James
Bay
Poplar Hill
STUDY AREA
Moosonee
Kenora
Dryden
Longlac
Hearst
Thunder
Bay
Cochrane
Timmins
Kirkland
Lake
New
Liskeard
Lake Superior
Sault Ste
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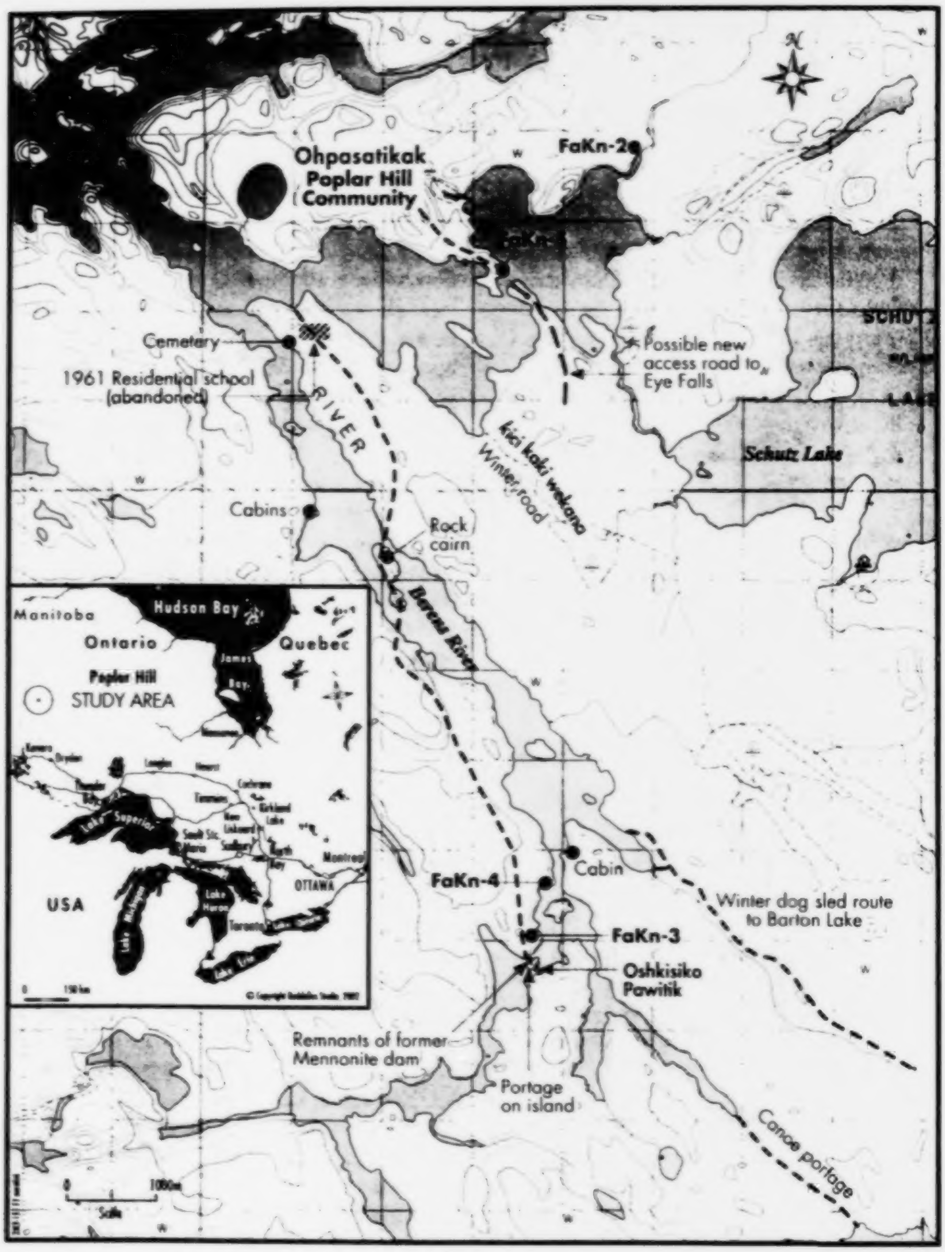
Bay
Montreal
OTTAWA
USA
Lake Michigan
Lake
Huron
Toronto
Lake Ontario
Lake Erie
0
150 km
Cabin
FaKn-4
FaKn-3
Oshkisiko
Pawitik
Winter dog sled route
to Barton Lake
Remnants of former
Mennonite dam
Portage
on island
Canoe portage
0
1000m
Scale

FIGURE 1. Map of Berens River area showing archaeological sites located.


Ohpasatikak
Poplar Hill
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RIVER
Possible new access road to Eye Falls
kici kaki wakana
Winter road
Schutz Lake
Cabins
Rock cairn
Berens River
FaKn-4
Cabin
FaKn-3
Winter dog sled route to Barton Lake
Oshkisiko Pawitik
Remnants of former Mennonite dam
Portage on island
Canoe portage
0
1000m
Scale
Manitoba
Hudson Bay
Ontario
Quebec
James Bay
Poplar Hill
STUDY AREA
USA
Lake Superior
Lake Huron
Toronto
OTTAWA
Montreal
Thunder Bay
0
150 km

FIGURE 1. Map of Berens River area showing archaeological sites located.

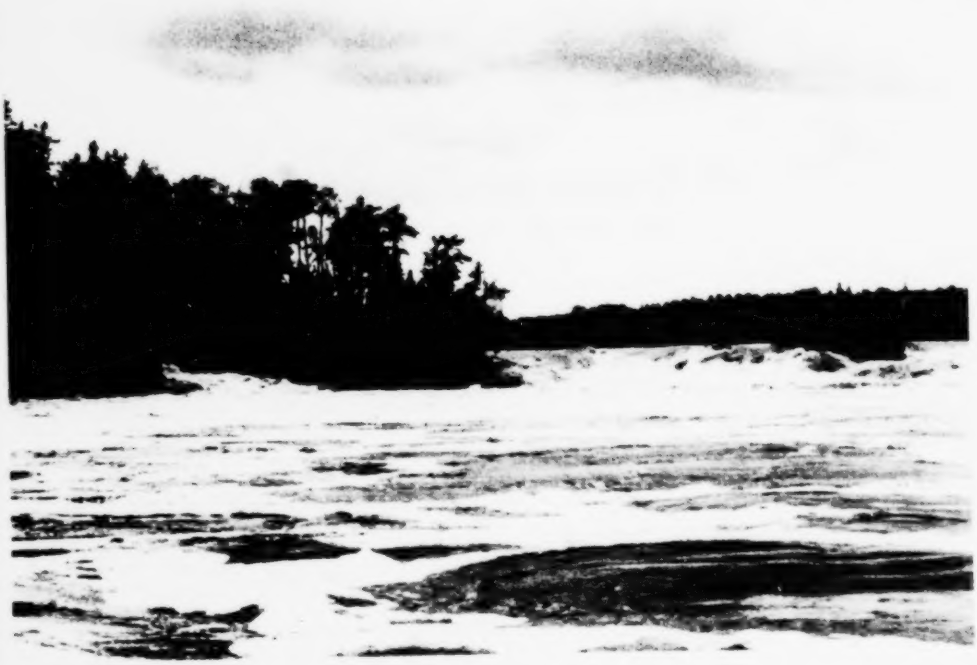

FIGURE 2. Photograph of Oshkisiko Pawitik (Eye Falls) Berens River.

with small sandy beach areas. Flakes from stone tool manufacture and use (one chert and one quartzite) were found in subsurface tests on the terrace.

Also, in the same area but closer to the falls are a possible old portage and remains of a Mennonite power project. Figure 3 is a photograph of Luke Dalla Bona and Robin Hughes subsurface testing the above area at the west side of Eye Falls. Just above this at the crest of the falls are the remains of a former dam built by the Mennonites during the 1960's (see Figure 1).

Site 2 - Old Campsite 1km Below Eye Falls

This site (FaKn-4) is located on the west side of the Berens River beside an area of fast water and back eddy below an island (for location see Figure 1). Five quartzite flakes and two chert flakes were recovered. This may be a possible fishing location site.

Site 3 - Ancient Village Site Near Poplar Hill

This ancient village and large campsite site (FaKn-5) is located on a rocky point on the east side of the Berens River about 2km south of the Poplar Hill Community (see location on Figure 1). The site is on a rocky point that has behind it a flat terrace area with a good depth of sandy clay soil. The area was burned over a few years ago and is now covered with small poplar trees. Buried in the ground are virtual layers of old living floors, fireplaces and activities that were undertaken on the site to be some 800 to 1,500 years ago. Subsurface tests indicate that there are large numbers of buried artifacts at the site.

Five subsurface pits out of a total of five pits contained cultural material. The front of the

FIGURE 3. Photograph of Luke Dalla Bona and Robin Hughs testing at Eye Falls.

site consists of open bedrock and therefore, the subsurface testing was concentrated in areas of soil cover. Soils at the site are predominantly sandy clay underlain by bedrock. The following artifacts were recovered (see Figure 4 for an illustration of representative artifacts):

Test Pit # one: Artifacts Recovered
Items: -One Aboriginal clay pottery fragment- decorated with cord-wrapped stick in classic Blackduck pottery design
-Three chert or flint flakes from stone tool manufacturing on the site
-Two bone fragments- one large mammal split long bone and one small fragment
-Three fire cracked rock from ancient cooking fires
-One worked quartz crystal bifacial core tool or bipolar core

Test Pit # two: Artifacts Recovered
Items: -Four fish vertebrae
-Five chert or flint flakes
-One clay pottery body sherd

Test Pit # three: Artifacts Recovered
Items: -Two clay pottery body sherd fragments
-Ten pieces of calcined bone, one piece of charcoal
-Two chert flakes
-One large quartz crystal flake

Test Pit # four: Artifacts Recovered
Items: --One worked 'smoky' quartz biface tool
-One worked platform flake tool
-Two fire cracked rocks from ancient cooking fires
-Nine quartzite flakes and core spalls

Test Pit # five: Artifacts Recovered
Items: --One chert flake
-Three quartzite flakes

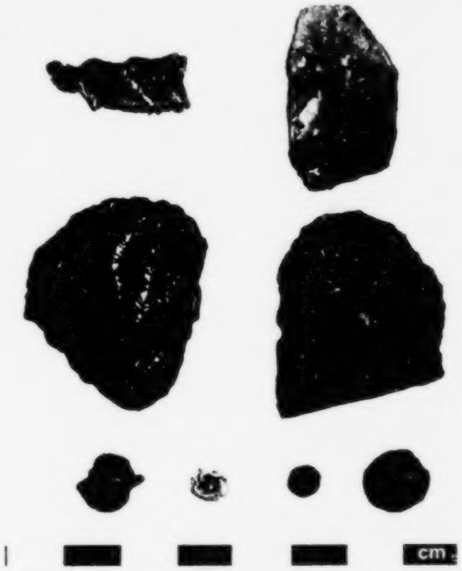

FIGURE 4. Representative artifacts from the ancient village site, site 3 (FaKn-5). Top row left: a decorated Blackduck pottery rim sherd. Top row right: quartz crystal bifacial tool, possible bipolar core. Middle row left: "smoky" quartz scraper tool. Middle row right: platform flake tool. Bottom row: fish vertebrae from old cooking fires.

SITE SIGNIFICANCE

FaKn-3 and 4 are small campsites and do not need any protection or mitigation. The ancient village site, FaKn-5 is a potentially significant site and is located a short distance from the community of Poplar Hill. It is recommended for mitigative Stage 3 archaeological test excavations.

SUMMARY

Site 3- FaKn-5 has potentially significant Native cultural value in the form of a buried archaeological/cultural heritage site that may be impacted by the proposed access road. Therefore it was recommended that further archaeological heritage assessment work be undertaken at the site. At a minimum, a Stage 3 archaeological test excavation and further subsurface test pitting should be undertaken to allow for site boundary definition and to assess the cultural significance of the site, which may date upwards of 1,500 years ago. It was also recommended that the above ancient village site be excavated by a crew of Poplar Hill First Nation students and other community members under supervision by Poplar Hill Elders and a licenced archaeologist. This would be part of the environmental mitigative measures for the proposed hydro project at Eye Falls. This would result in the recovery of important information on the past history of the Poplar Hill First Nation.

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SUMMARY OF 2000 ARCHAEOLOGICAL INVESTIGATIONS BY D.R. POULTON & ASSOCIATES INC.

DANA R. POULTON AND CHRISTINE F. DODD

D.R. Poulton & Associates Inc. (DPA) is based in London and operates under the direction of Dana Poulton. In addition to two permanent staff members, 28 people were employed by the firm on a seasonal basis in 2000.

The firm conducted 48 separate archaeological projects in 2000. They involved 12 separate counties and regional municipalities, from Essex and Lambton Counties on the west to Victoria County on the east, and from Lake Erie and Lake Ontario northward to Huron County and Simcoe County.

The projects carried out by the firm in 2000 encompassed a range of assessments in fulfilment of legislative requirements. They included 23 draft plans of subdivision, one block plan and two municipal parks. Additional studies consisted of eight natural gas pipelines, seven Provincial highway and municipal road projects, three power stations, a hydro transmission line, two sanitary trunk sewers and a golf course development.

Forty-one of the projects conducted by the firm in 2000 included or consisted of Stage 1 background studies. Twenty-eight projects included Stage 2 surveys. A further 10 projects included Stage 3 test excavations. Finally, three projects included or consisted of Stage 4 salvage excavations.

Of the archaeological surveys conducted by D.R. Poulton & Associates in 2000, 18 involved blocks of land such as proposed subdivisions; they had a combined surface area of 219 hectares. The remaining 10 surveys involved proposed pipelines and other linear corridors; they had a combined length of 78 kilometres.

DPA investigated 35 archaeological sites in 2000. The inventory included 19 previously known and registered sites and 16 previously unknown sites discovered by the firm. Of the newly discovered sites, four were registered in the course of assessments conducted by DPA. The other 12 consisted of undiagnostic isolated find spots or late historic components which were not considered to be significant enough to register. Summaries of three of the projects undertaken by the firm in 2000 are presented below.

D.R. Poulton & Associates Inc.
429 Wharncliffe Road South
London, ON N6J 2M6

VICTORIA PARK (AFHH-244)

As described in previous Annual Archaeological Reports, since 1995 D.R. Poulton & Associates has been engaged on a long-term study of Victoria Park in the City of London (Poulton and Sutton 1997, Poulton and Dodd 1998, 2002). The investigations are being conducted in advance of improvements to park infrastructure and are being carried out as part of the Victoria Park Restoration Master Plan.

The archaeological investigations have demonstrated that this six-hectare property contains the well-preserved remains of the Framed Infantry Barracks, a ten-acre complex that formed the heart of the 73-acre military reserve established by the British immediately following the Rebellion of 1837. The garrison was based in London from 1838 to 1853, when troops were withdrawn to England, and again from 1861 to 1869 during the period of unrest of the Fenian Raids and the American Civil War. The barracks was cleared in the early 1870s to make way for the creation of Victoria Park.

The focus of the excavations in 2000 was what was termed the proposed Main Spine Path. The alignment for this path has a width of up to 14 metres and extends diagonally through the park from northwest to southeast (Figure 1). The Main Spine Path was designed to accommodate year-round pedestrian traffic as well as vehicles during major events. Several sources were consulted in order to identify archaeological remains that could potentially be impacted by this alignment, including the detailed plans for the Framed Infantry Barracks laid out in a 53-page estimate approved in September 1839 (National Archives of Canada W055/1917). The results showed that the alignment cut through four documented structures of the Framed Infantry Barracks. The two most notable were the southwest corner of the 300-foot long soldiers' quarters and the western part of the 275-foot long officers' quarters.

As a preliminary step in the assessment of the Main Spine Path, one-metre squares were excavated on the segments of the alignment that transected the documented structures. The test excavations recovered 21,092 artifacts, most of which derived from the area of the officers' quarters and the nearby palisade.

One surprise in the test excavations was the discovery of a stone-lined cellar located between the officers' quarters and the palisade. It appeared at a depth of only 6-13 cm below the sod. This structure was designated Feature 16 (Figure 2). It is not depicted on any of the plans of the infantry barracks. However, subsequent research determined that it probably represents a root cellar that replaced one of two earlier timber-lined root cellars. The latter were documented but not mapped in the 1839 plans for the proposed barracks. Built in imperial measure, as were all structures in the barracks, Feature 16 had a length, width and depth of 15 feet, 12 feet and six feet, respectively, with an interior dimension of 8.7 cubic metres. It was very rich in artifacts, yielding 12,622 specimens.

The main focus of the 2000 excavations in Victoria Park was the 12-metre length of the alignment of the Main Spine Path that transected the two-storey officers' quarters (Figure 3). The 1839 construction plans show that the foundation for that structure was supported by 196 cedar posts, each 14 inches in diameter and 3.5 feet long. The building was destroyed in a fire in 1872, two years before Victoria Park was dedicated.

The 2000 salvage excavations recovered ample evidence of the 1872 fire, with burnt artifacts, fused glass, ash and fire-reddened soil. The officers' quarters excavations revealed three rows of posts in post pits spaced 1.5 metres apart, the upper several centimetres of each post charred by the fire. The salvage excavations of the soldiers' quarters confirmed that posts and post pits were also used in the construction of the foundation for that structure.

The Main Spine Path excavations in Victoria Park recovered 76,330 artifacts. The single largest artifact category consists of nails: in all, 19,193 nails were recovered. They account for fully 25% of the entire artifact sample and attest to the massive scale of the framed construction of the officers' and soldiers' quarters, the two largest buildings in the barracks.

Faunal remains were almost as common as nails: 13,795 specimens were recovered, representing 18% of the entire Main Spine Path artifact

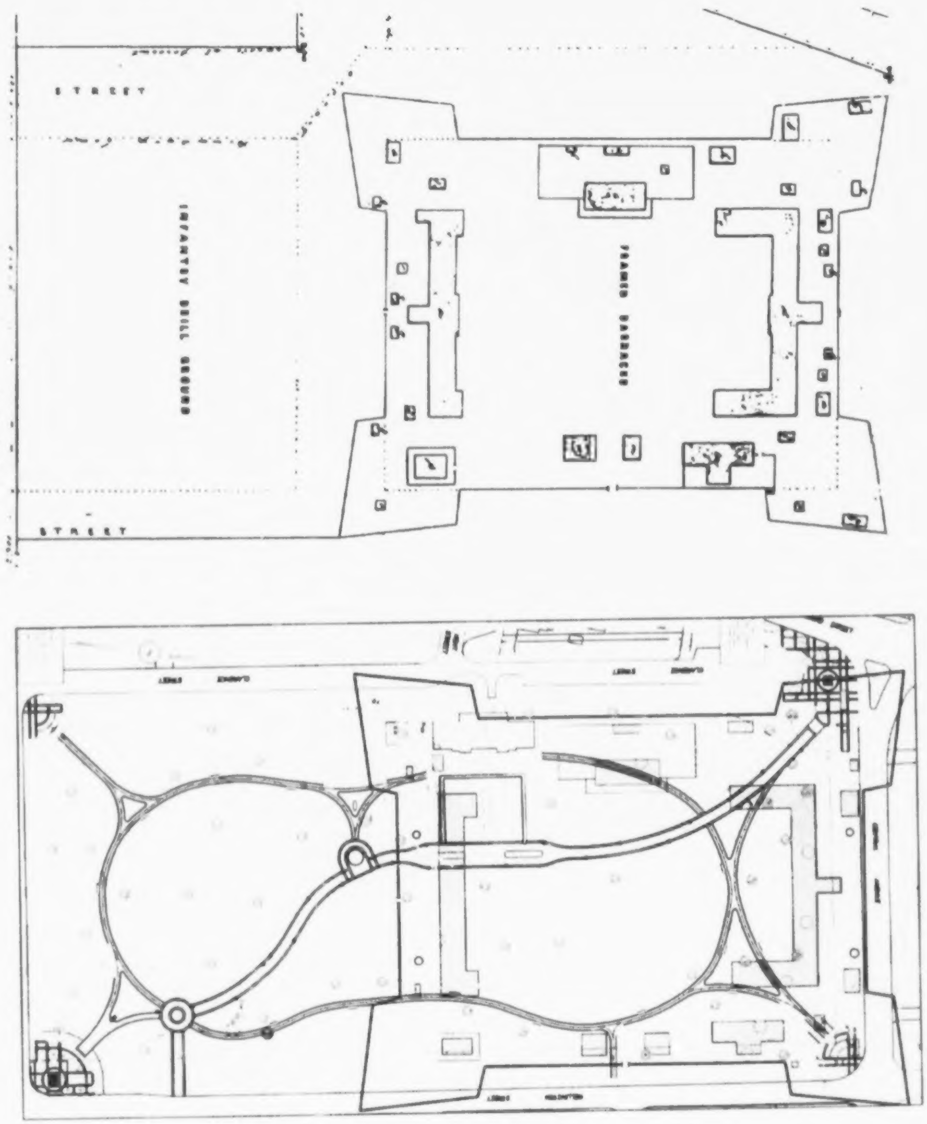
STREET
INFANTRY DRILL GROUND
FRAMED BARRACKS
DUKE STREET
STREET

FIGURE 1. Victoria Park: 1849 plan of the Framed Infantry Barracks (left) and 2004 Restoration Master Plan (right).

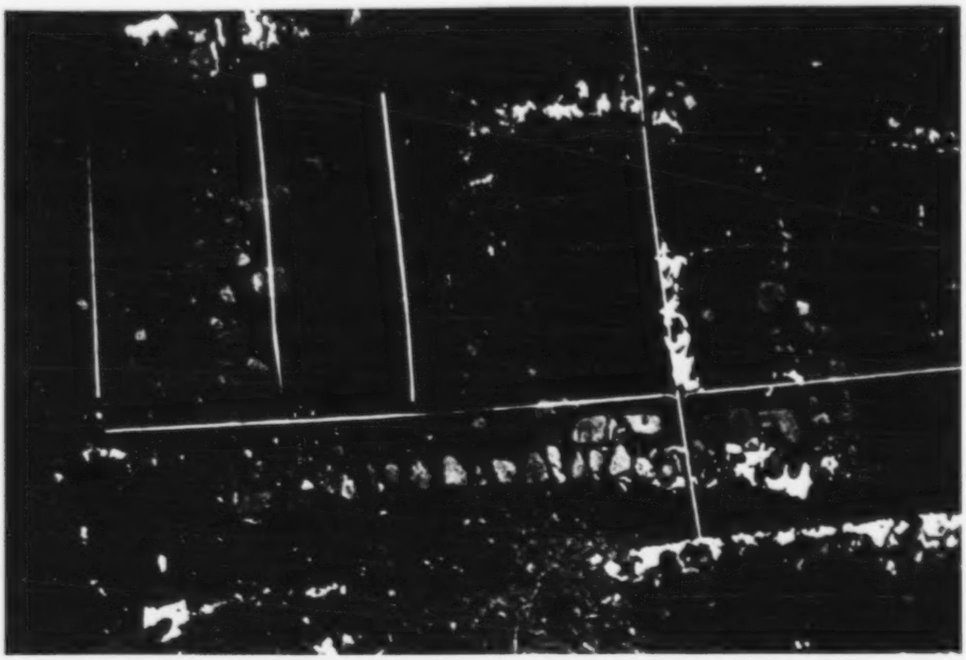

FIGURE 2. The initial exposure of Feature 16, the root cellar associated with the officers' quarters.

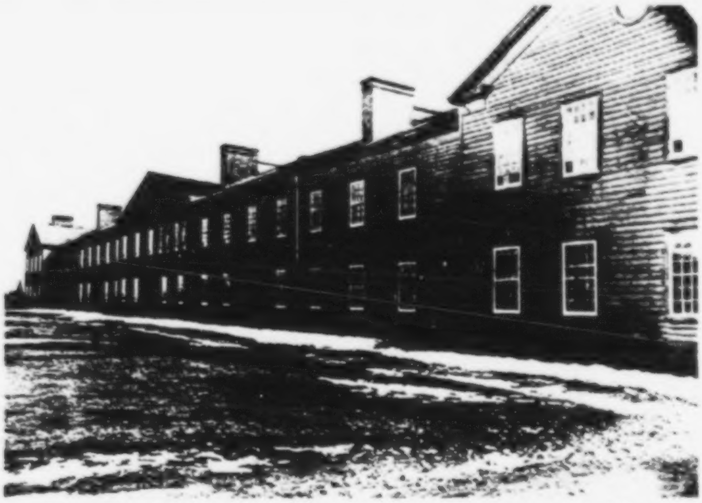

FIGURE 3. North face of the officers' quarters ca. 1866. Photo by Ensign Albert Augustus Phipps, 60th Rifles (J.J. Talman Regional Room, University of Western Ontario.

sample. Following Napoleon's famous aphorism that an army marches on its stomach, the faunal analysis shows that the stomachs this garrison were marching on were mainly filled with beef, veal, mutton and lamb, with pork a distant third. Rabbit was also consumed, as well as various birds and fish. Bird was dominated by chicken, but goose, pheasant, turkey, woodcock and duck were also present. The fish in the diet included sucker, bass, creek chub, catfish, freshwater drum, walleye, pike and trout.

Military armaments and insignia constitute a small but important part of the Main Spine Path artifact sample. The armaments included a steel socket bayonet of the 1853 Pattern 3-Band Enfield type. It has a 13-inch long blade with a triangular-cross section designed to create a puncture wound that would bleed freely and be difficult to suture. Military buttons were the most common items with insignia. Those recovered in 2000 relate to eight different British infantry regiments as well as the Royal Artillery and the Canadian Militia.

The most unusual military items recovered in 2000 were parts of regimental stemware and tableware services. They were found in the officers' quarters and the nearby root cellar and palisade. Artifacts such as these are usually very rare on military sites. Three wine glasses had the regimental initials or numbers engraved on their bases. Two, one of which was nearly complete (Figure 4), was engraved "RCR" for the Royal Canadian Rifles. That regiment was stationed in London from September 1861 to 1865. The third wine glass was engraved "XX" for the 20th Regiment (Figure 4). That regiment was also represented by fragments of a flow blue tableware service. It bears a transfer-printed mark "XX" inside a laurel wreath surmounted by a crown (Figure 5). This service has the maker's mark "William Ridgeway, Son & Co.": the firm operated under that name from 1838 and 1847.

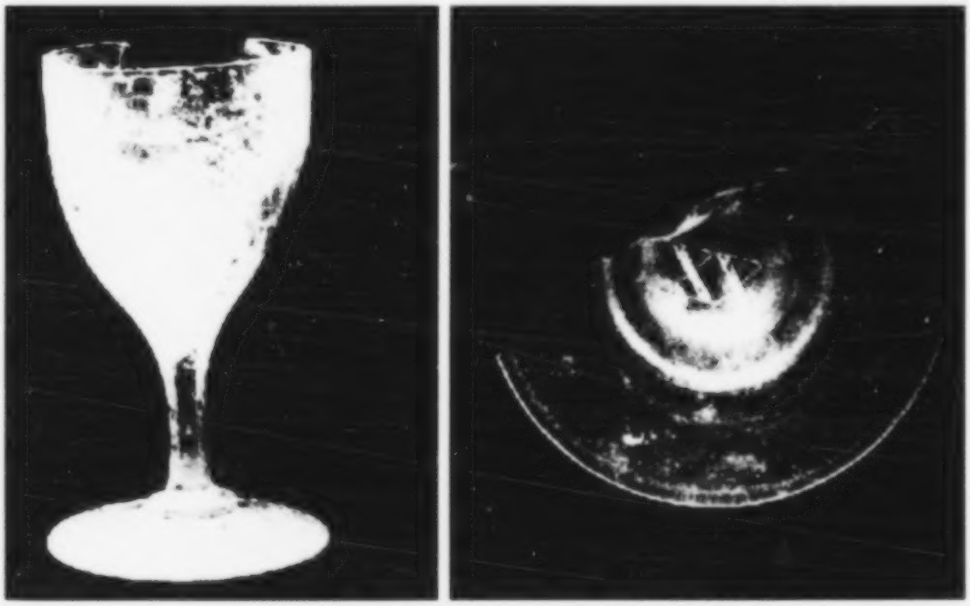

FIGURE 4. Regimental stemware: Royal Canadian Rifles (left) and 20th Regiment (right). Photo by Jackie Noble, Noble Concepts.

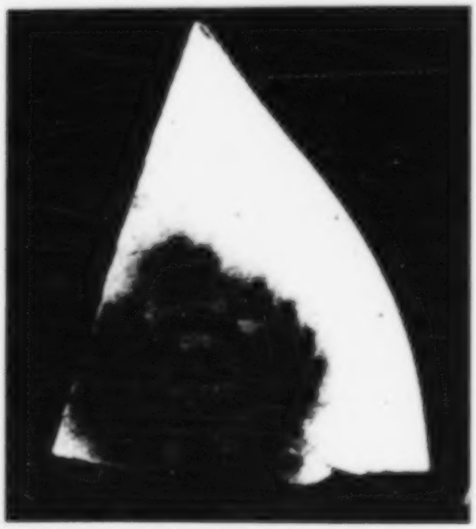

FIGURE 5. Tableware service of the 20th Regiment. Photo by Jackie Noble, Noble Concepts.

The 20th Regiment was stationed in London from September 1847 to May 1850.

Reference was made above to the original 1839 construction plans for the barracks. Those plans have been an invaluable aid to the study, as have the numerous scaled plans for the barracks drafted by the Royal Engineers from the 1840s to the 1860s. Despite the wealth of contemporary data on the infantry barracks, the Victoria Park excavations have presented many surprises, and not only because of unexpected discoveries such as the stone-lined root cellar associated with the officers' quarters.

At the outset of the excavations in 1999 it was assumed that if a corner or two of a few major buildings in the former barracks could be located we could use that information to effectively anchor the entire barracks complex in space. All that would be required, we thought, would be to use AutoCAD to plot one or more contemporary plans on the modern landscape. Contrary to our expectations, experience has shown that there are minor differences between the various as-built plans of the barracks. Needless to say, those variations are particularly problematic for smaller structures, but there are differences of at least a few metres either way even for the major buildings. Some of these variations may result from errors in map copying. Others may simply reflect the fact that the plans were as accurate as they needed to be, but not altogether as precise as they could have been.

THE WILLOWBANK ESTATES SITE (AHGS-34)

In 2000 D.R. Poulton & Associates Inc. carried Stage 3-4 excavations as the Willowbank Estates site in the Village of Queenston. The excavations followed the 1999 discovery of the site in the course of a Stage 1-2 assessment of a proposed six-lot residential development of a 2.7 hectare parcel of land. This property formed the rear portion of the historic Willowbank estate. The house of that name was located directly east of the proposed development. It is a stately Classical Revival house built in 1833-1835 for Alexander Hamilton, Sheriff of the Niagara District and fourth son of the powerful Upper Canadian businessman, Robert Hamilton.

The initial archaeological survey was conducted by test pitting at a five-metre interval. It identified five discrete clusters of historic and prehistoric artifacts. As described in the agency report (DPA 2003a), the 2000 investigations primarily focussed on the salvage excavation of two prehistoric loci, Clusters A and B. It also included test excavations on Cluster E, a concentration of mid 19th century material located close to the historic house.

The most unusual area of the greater site investigated in 2000 was Cluster B. It was situated 40 metres northeast of Cluster A which was tentatively identified as an Early Archaic camp. The Stage 2 survey initially defined Cluster B as five positive test pits within a five-metre diameter. Although only six chipped lithic artifacts were recovered from these test pits, they included burnt biface fragments. That fact and the tight concentration of the remains indicated that Cluster B was potentially significant. The Stage 3-4 excavations conducted in 2000 confirmed that assessment. In all, 39 one-metre units were excavated; they yielded 415 chipped lithic artifacts. The excavations determined that the prehistoric cultural remains were limited to a roughly circular area 11 metres in diameter, but that virtually all of the prehistoric cultural remains were effectively concentrated in an area only seven metres in diameter.

Of the 421 chipped lithic artifacts recovered by the 1999-2000 investigations of Cluster B, 419 are of Onondaga chert; the two exceptions are of indeterminate chert. Bifaces represent the single largest category in the collection. In all, 238 bifaces or biface fragments were recovered, representing 57% of the collection. The balance of the prehistoric material consists of one bipolar wedge, one core, two utilized flakes and 179 pieces of chipping detritus.

The only complete biface is also the only one that isn't burnt; the other bifaces are burnt and are generally highly fragmented by heat shattering (Figure 6). The actual incidence of bifaces is actually probably even higher than 57%, as the material categorized as chipping detritus includes 68 burnt specimens classified as shatter. If, as seems likely, the shatter actually consists of

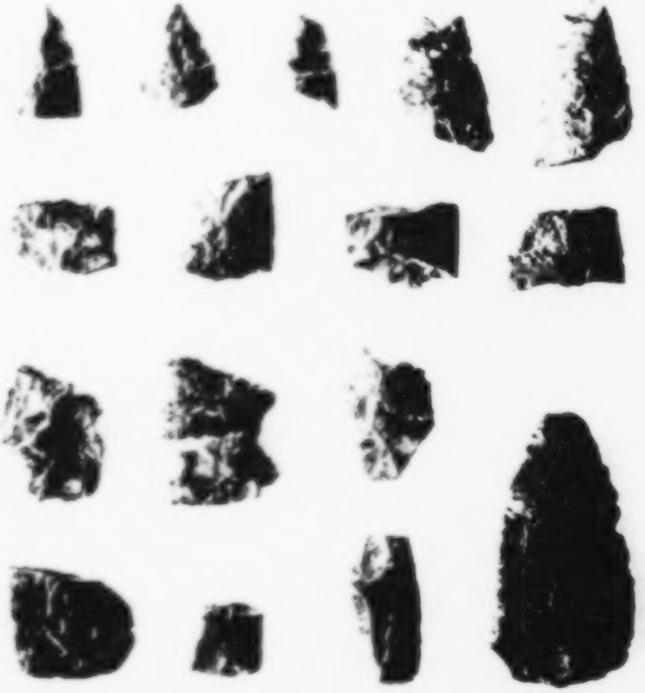

FIGURE 6. Select bifaces from Cluster B of the Willowbank Estates site. Photo by Christine Dodd, D.R. Poulton & Associates Inc.

small unidentifiable fragments of heat-shattered bifaces, the actual proportion of bifaces in the prehistoric sample from Cluster B is probably in the order of 75%.

In summary, the evidence suggests that Cluster B primarily consists of a concentration of heat-shattered Onondaga chert bifaces that were ritually killed. A review of the comparative literature for the Lower Great Lakes identified only three other examples of the ritual killing of artifacts. Clearly, the prehistoric component of Cluster B, if not altogether unique, is an extremely rare occurrence.

One of the three ritual kill sites is the Piffard site, a Late Archaic site in Upper New York State, where Burial 13 included a cache of smashed but unburnt projectile points of the Perkiomen type (Ritchie 1980:154). The other two examples are in southwestern Ontario. They are the Early Paleo-Indian Crowfield site and the Late Paleo-Indian Caradoc site. Crowfield had a pit containing more than 200 heat-shattered tools and preforms (Deller and Ellis 1984). This feature has been interpreted as a cremation, although human bone has not been preserved due to the age of the site. The Caradoc site consisted of a cache of deliberately smashed bifaces (Ellis and Deller 2003).

Cluster B cannot easily be attributed to a particular time period or cultural complex, as the recoveries did not include any definitive diagnostics such as projectile points. However, the bifaces were well made, medium-sized, trianguloid in form, and exclusively manufactured of high quality Onondaga chert. All of those characteristics are most consistent with a date in the Terminal Archaic or succeeding Early Woodland time period, from around 1000 B.C. to the time of Christ.

In addition to the prehistoric remains described above, the 2000 archaeological investigations in all areas of the Willowbank Estates property recovered varying quantities of 19th century Euro-Canadian remains. Most of those remains are associated with the occupation of the Willowbank house, but a residue consisted of weaponry. The latter include 12 musket balls and a flake from a gunflint.

Musket balls generally had an effective range of 50-60 metres. The extensive distribution and relatively large number of the musket balls recovered by the limited 2000 archaeological excavations strongly indicate that the Willowbank property formed part of an early 19th century military conflict. It may be that the remains relate to the Battle of Queenston Heights, which was fought on October 13, 1813 (Stanley 1983:124-132). Alternatively, they may relate to a more localized skirmish fought later in the War of 1812.

The plan of the Battle of Queenston Heights by Stanley (1983:128) shows that the focus of the American forces crossing the Niagara River was the Upper Landing, located on the river frontage of the Village of Queenston about 500 metres southeast of the Willowbank property. If the musket balls from the property do relate to that battle, it may be that some of the American forces came ashore at the Lower Landing which was located at the mouth of the creek which flows through the Willowbank property. From there they could have infiltrated up the ravine and through the Willowbank property. Opposition from the British forces at that point would explain the presence of the musket balls within the Willowbank property.

THE JARRETT-LAHMER SITE (ALGv-18)

In 2000 D.R. Poulton & Associates carried out Stage 3 test excavations at the Jarrett-Lahmer site, a 16th century Iroquoian village located just south of Paramount Canada's Wonderland in the City of Vaughan. The 2000 test excavations investigations formed part of a multi-year assessment undertaken by DPA for Northwest Jane Rutherford Realty Limited. The focus of that assessment is the 74-hectare Vaughan

Centre residential and commercial development which contains the site. The assessment was initiated in 1995.

The Jarrett-Lahmer site is located on a point of land within the confluence of two branches of the West Don River. Research suggests that this site is closely related to the Keffer village, located 3.25 kilometres to the southeast. Jarrett-Lahmer was known to collectors as early as the 1880s, and invaluable information on the site was recorded in the 1920s by the artist and avocational archaeologist A. J. Clark. His several visits to the site include one in 1924 when the greater part of the site was ploughed for the first time (Figure 7).

The first intensive modern assessment of the site was carried out by D.R. Poulton & Associates in 1996. It consisted of a Stage 3 controlled surface collection of the tableland portion of the site and a systematic survey of the adjacent slopes. Altogether, the Stage 3 intensive surface examination of the site documented a total of 1,695 artifact stations, each of which comprised the location of one or more individual artifacts within a one-metre radius (Figure 8). The actual number of artifacts observed and recorded during the course of the surface examination totalled 2,496 specimens.

The 1996 assessment determined that the Jarrett-Lahmer site covered a total surface area of some 1.19 hectares, including 0.97 hectares of habitable tablelands. It also included extensive artifact-rich middens on the slopes. Although this site was not the largest Iroquoian village in the region, it was certainly one of the richest and best preserved. That fact can be illustrated by reference to the controlled surface collection of the tableland portion of the site. Controlled surface collections have been carried out on sites in southern Ontario since the mid to late 1970s. Based on the number of artifact stations per hectare, the Jarrett-Lahmer site is richer than any other Iroquoian village in the literature for Ontario, and more than twice as rich as any other Iroquoian village in the 28-year experience of the personnel involved in the assessment of this site. That richness probably reflects a lengthy and/or dense occupation, but also derives in part from the fact that the site appears to have been in pasture for most of the time since the property was first settled by Jacob Lehman in 1824.

During the period spanned by the 1995-1996 investigations by DPA, the point of land containing the Jarrett-Lahmer site was slated for a proposed hotel. The archaeological assessment identified the site as a major planning concern (DPA 1995, 1996). In order to address that concern, the proponent revised the draft plan to incorporate the Jarrett-Lahmer site within a proposed community park, designated Block 266. From the planning point of view, the decision to preserve the site represented the single most important outcome of the 1996 assessment.

Further fieldwork on this site was undertaken in 1999 by Archaeological Services Inc. (ASI). That work related to a proposed sanitary trunk sewer and to proposed channel works in the valley lands on the west side of the site. The sanitary trunk sewer and channel works in turn were related to the servicing of the new subdivision in Block 32, located on the west side of Highway 400, upstream from the Jarrett-Lahmer site.

ASI conducted a Stage 1-2 assessment of the western slope in the spring of 1999 and was to conduct Stage 3 test excavations. Unfortunately, in August 1999, before they were implemented, the entire western slope of the site was bulldozed in the course of grading associated with the construction of the adjacent sanitary trunk sewer. The damage done by the grading varied from topsoil disturbance and compaction to topsoil removal and limited subsoil disturbance to the complete destruction of topsoil and subsoil. In the late summer and fall of 1999 ASI spent three months on the Stage 3-4 excavations of the remaining deposits on the western slope (MacDonald et al. 2002: 29-40).

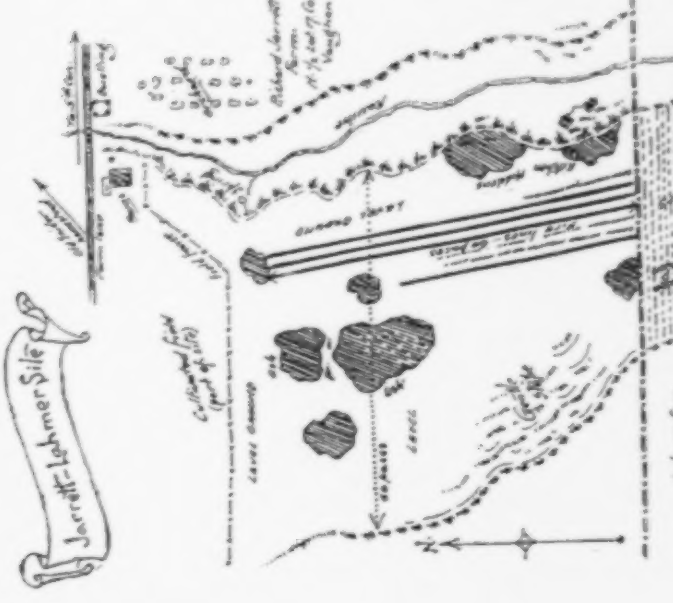
Jarrett-Lahmer Site
Lot 17, Con. 5, Vaughan Tp.
Cultivated field (part of site)
Lahmer farm
N

FIGURE 7. The Jarrett-Lahmer site: 1924 sketch map by A.J. Clark.

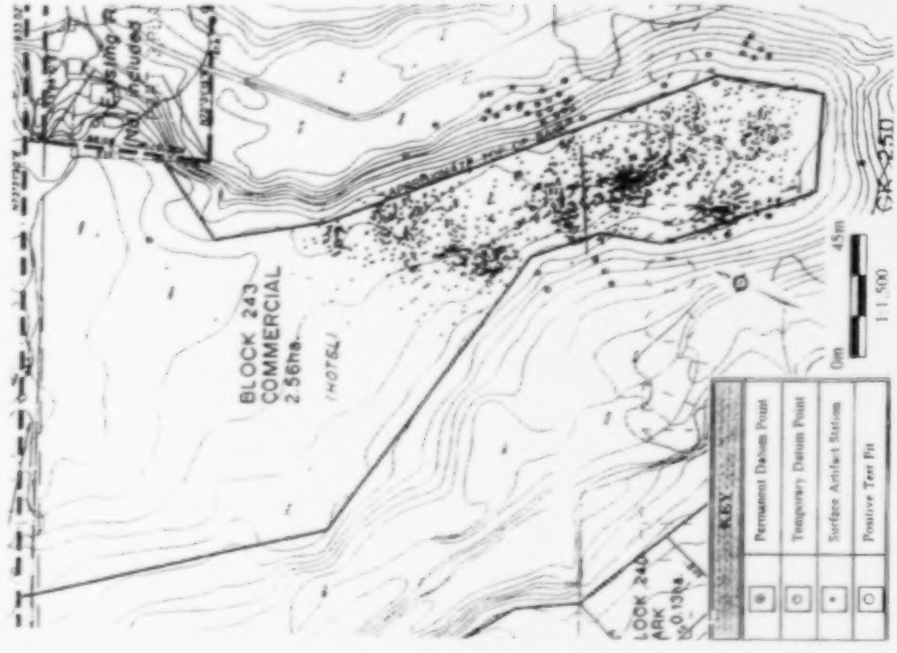
BLOCK 243
COMMERCIAL
2.56ha
(HOTEL)
KEY
Permanent Datum Point
Temporary Datum Point
Surface Artifact Station
Positive Test Pit
0m
1:1,500
45m

FIGURE 8. The Jarrett-Lahmer site: 1996 investigations.

The disturbance and subsequent excavations in 1999 on the western slope involved a relatively small area of the Jarrett-Lahmer site. That left the majority of the site as an ongoing concern for the Vaughan Centre development. The plan for the site was to leave the artifact-rich middens deposits on the eastern slope in their natural state. A more active approach was required for the tableland portion of the site which lay within the future community park. That area of the site, including the southern tip, was the focus of the 2000 excavations by D.R. Poulton & Associates (2003b).

There were three elements to the strategy for the investigations of the Jarrett-Lahmer site. The first was to conduct test excavations to confirm the effective northern limits of the site, the only area where the site was not delimited by natural slopes. The second was to preserve the tableland portion of the site within the future park by capping it with geotextiles and clean topsoil. The third was to design the future park to ensure that insofar as possible, any construction that would require deeper impacts was located outside the archaeological protective zone.

The 2000 investigations of the Jarrett-Lahmer site are illustrated in Figure 9. They included test excavations at the southern tip of the site that was to be impacted by the construction of a proposed berm. Little was recovered from that area. More useful information resulted from test excavations conducted at the northern extremity of the site.

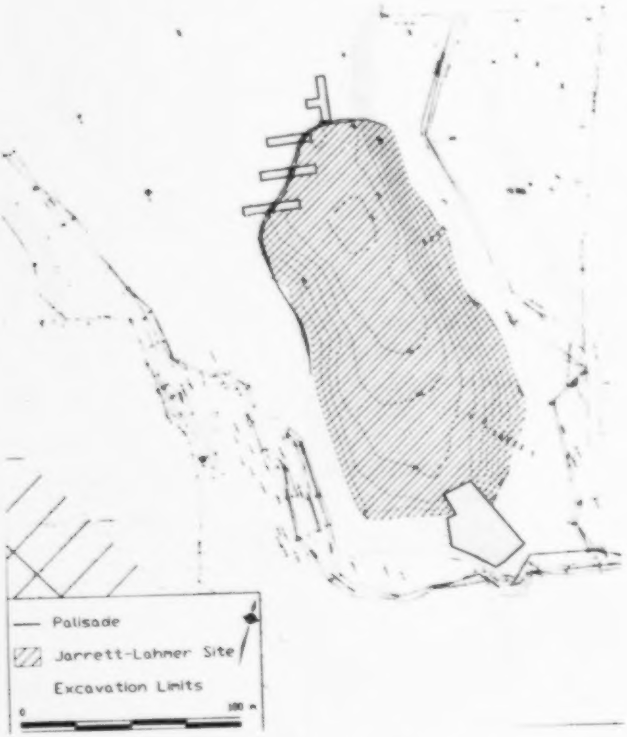

FIGURE 9. The Jarrett-Lahmer site: 2000 test excavations.

The test excavations to determine the northern limits of the site involved a series of test trenches excavated at ten-metre intervals. Up to three lines of palisade were uncovered in three of the test trenches. The fourth test trench, which was T-shaped, uncovered part of a basal midden: it was not excavated but could overlie the palisade. The results of the test excavations confirmed that the tableland portion of the site which represents the habitable portion of the village has a surface area of 0.95 hectares (2.3 acres). Based on the 1996 surface examination and the 2000 test excavations, cultural remains in the form of artifacts in the ploughzone and miscellaneous subsurface features and isolated post moulds extend a maximum distance of 25 metres beyond the outermost row of palisade.

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SUMMARY OF 2000 RESEARCH BY ARCHAEOLOGICAL SERVICES INC.

RONALD F. WILLIAMSON, DAVID A. ROBERTSON, AND FRANK A. DIETERMAN

Archaeological Services Inc. (ASI), operated under the overall direction of Ron Williamson, conducted 181 archaeological assessments throughout Ontario during 2000. The Built Heritage, Cultural Landscape and Planning Section, which complement the core archaeological consulting services of the firm, also conducted numerous heritage and planning studies. The archaeological fieldwork resulted in the registration of 85 new sites and the re-examination of several others. Further investigations were conducted on many of these sites, as well as on sites discovered in previous field seasons. Eight of the projects undertaken by the firm are discussed in further detail below.

ARCHAEOLOGICAL SURVEY OF BALLS FALLS CONSERVATION AREA

ASI was contracted by the Niagara Peninsula Conservation Authority to carry out a multi-disciplinary assessment of selected areas of the 220-acre (92 ha) Ball's Falls Heritage Conservation Area (Ball's Falls HCA), located near Jordan, in the Regional Municipality of Niagara, Ontario. The conservation area is situated at the junction of two dominant landscape features, where Twenty Mile Creek drains over the edge of the Niagara Escarpment, representing the second largest cut in the escarpment. The drop encompasses two major sets of falls.

The history of Ball's Falls HCA property originates with a 1,500-acre land grant in the Township of Louth to various members of the Loyalist Butler family in 1803. All but 300 acres of this grant was then sold to brothers John and George Ball in 1807. John and George Ball recognized the economic potential of the waterfalls and rapids of Twenty Mile Creek as a source of power, and began the developments that led to the rise of one of the more successful early to mid-19th century industrial complexes in the Niagara region.

The objective of the 2000 project was to identify and assess the archaeological resources at Balls Falls through both the collection and assessment of background data pertaining to the study area and the undertaking of archaeological field investigations. The systematic archaeological survey of the property resulted in the registration of one pre-contact, two multi-component pre-contact and historic, and eleven historic sites. Several of these were subjected to limited test excavations. The pre-contact sites represent Late Archaic and Woodland period occupations at both the upper and lower falls. Sites relating to the early 1800s include the original Ball homestead, gristmill, saw mill and associated races. At

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Archaeological Services Inc.
528 Bathurst Street
Toronto, ON M5S 2P9

the upper falls, in addition to archaeological deposits associated with a woollen mill, a factory office and several mill workers' houses were discovered. Mid-19th century sites include the brick-constructed Ball residence, tenant houses on both sides of Twenty Mile Creek, and a possible boarding house at the upper falls. Late 19th century sites include farmhouses and a brick lime kiln. Numerous cultural landscapes in the form of relict roadways, former quarries, dams, and mill races were also examined.

Recommendations arising from the archaeological assessment addressed the potential of future archaeological investigations, the preservation of existing structures, educational opportunities for public interpretation, and further examination of archival documents.

THE DISCOVERY OF THE REMAINS OF UPPER CANADA'S FIRST PARLIAMENT BUILDINGS

In the fall of 2000, test trenches excavated on three portions of a downtown Toronto property bounded by Front Street on the north, Berkeley Street on the west and Parliament Street on the east, yielded evidence of archaeological deposits associated with the first and second Parliament buildings of Upper Canada. This evidence was amassed through systematic research involving a variety of investigative techniques and analyses. These included historic documentation and archival research, artifact identification and distributional analyses, stratigraphic and sub-surface archaeological feature interpretation, identification of historic construction techniques, and lithographic, botanical, and faunal analyses. Each analysis reached independent conclusions that collectively contributed to a compelling argument for the presence of parliamentary-era cultural remains.

ARCHIVAL EVIDENCE

In 1795, Lieutenant Governor Simcoe ordered the first Parliament Buildings of Upper Canada to be built at York. The structures, completed in 1797, comprised two brick and two frame buildings. A Town Blockhouse was built to the immediate south of the Parliament Buildings in 1799. During the War of 1812, an American force occupied York for a week in the spring of 1813, at the end of which time they burnt the Parliament Buildings and Town Blockhouse, among many other buildings. Soon after the 1813 invasion, the first Parliament Buildings were rebuilt as two-storey brick structures for billeting British troops. In 1817, the reconstructed upper floors of the first Parliament Buildings were being used to house newly arrived immigrants.

The second Parliament Buildings of Upper Canada, constructed between 1818 and 1820, connected the rebuilt wings of the first buildings with a two-storey brick building. The fate of the second Parliament Building was similar to that of the first buildings. On December 30, 1824, the north wing and centre block were destroyed by fire. The south wing, while damaged, remained standing.

All of the brick from the ruins of the parliament buildings had been reclaimed by 1830. The property remained vacant until the Home District Gaol was constructed from 1838 to 1840. The Consumer's Gas Company purchased the property ca. 1879. The gaol was demolished ca. 1887 when Consumer's Gas began to expand their operations, eventually constructing a large industrial complex. The Consumer's Gas structures were demolished in 1964, when the property was developed to house an automotive centre, car and truck washes, a gas station, and car rental agency.

Four reliable archival maps, which depict the Parliament buildings, were overlaid to define an envelope encompassing all of the depicted Parliament buildings. This envelope, therefore, represented the maximum area of highest potential for recovering parliamentary-era cultural remains (Figure 1). The trench in which the relevant archaeological remains

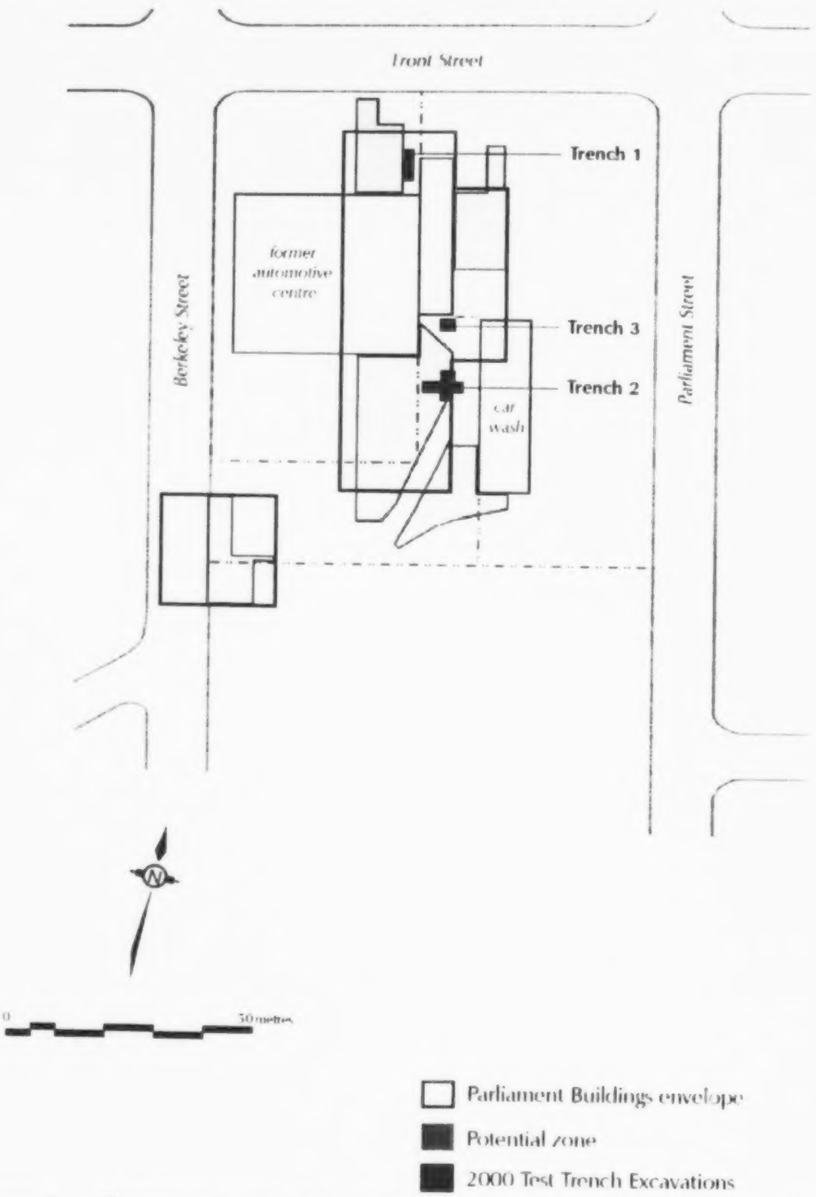
Front Street
Trench 1
former automotive centre
Berkeley Street
Trench 3
Trench 2
car wash
Parliament Street
N
0
50 metres
☐ Parliament Buildings envelope
▨ Potential zone
■ 2000 Test Trench Excavations

FIGURE 1. Composite overlay of the Parliament Buildings envelope, indicating the archaeological potential zones (identified on the basis of the analysis of subsequent construction activities in the area), the locations of 2000 excavations, and the locations of the current structures on the property.

were found was situated within this envelope in a comparatively undisturbed area within the later District Gaol and Consumers' Gas complexes.

STRUCTURAL EVIDENCE

Evidence pertaining to the presence of a late 18th century structure was recovered in the form of fragmented early clay bricks above a loose-laid, limestone footing, the charred remains of wooden floor joists and floorboards, and patches of lime-sand mortar. Based on the historic map overlays, it is likely that the excavation area, within which these features were situated, was positioned on the east wall of the southern building of the first Parliament buildings (Figure 2).

The footing consisted solely of Gull River formation limestone, which was actively quarried at Kingston by the 1790s. The fact that limestone, rather than locally available siltstone, was used for the footings suggests that it was readily available through an established military supply system. That superior construction materials were employed in the project is supported by the observation that the first Parliament buildings were the first brick structures in York, as was befitting of their importance and stature.

The presence of charred floor joists and floorboards overlying fire-reddened subsoil was also documented in Simcoe era structures at Fort York. At the Parliament site, botanical study yielded evidence of an indigenous seedbank (including bramble, chenopod, and elderberry) and a prevalence of birch and pine pollen, in the soil under the charred boards and joists. These seeds, a small number of which were charred, represent colonising species that would have quickly grown in an area that had been cleared for approximately six months. Normally, this botanical material would not have survived for any length of time, but both seeds and pollen would have been preserved by anaerobic conditions such as that found below a building floor. Moreover, the extremely low ragweed frequencies in the samples are consistent with an early 19th century date for the deposits, a time of comparatively little forest clearance. A lack of pollen contamination from later, more prevalent species indicated that this assemblage is derived from a sealed deposit. The charring of some of the seeds, together with the presence of charred floor boards and burnt fragments of early 19th century brick indicates that the original deposit of the plant remains dates from the short period between the clearing of the land and the construction of the first buildings. While there was a brief period of exposure after the 1813 fire, the new flooring of the second set of buildings resealed the deposit.

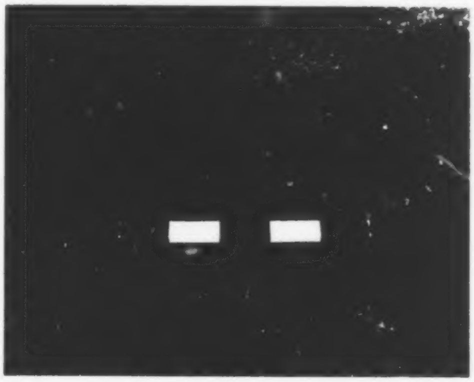

FIGURE 2. The charred remains of four floor joists from the first Parliament Buildings.

ARTIFACT EVIDENCE

The artifact assemblage from the layers associated with the structural features is also consistent with the Parliament Buildings era. The artifacts found during the excavation of the floor are overwhelmingly dominated by creamware ceramics, manufactured in the late 18th and early 19th centuries. Datable creamwares included a fragment of inlaid slip decoration (ca. 1795) and pieces attributed to the Royal pattern (ca. 1790-1810), a pattern also recovered from 1990s excavations at the Fort York garrison. Moreover, the creamwares and pearlwares were located to the west of the limestone footing, thought to be the interior of the building. Thin window glass and hand wrought nails within associated strata also provide clear evidence of the early date of those deposits.

SUMMARY

Together, the historical and archaeological data indicate that the excavations revealed a small portion of the south wing of the first Parliament buildings complex. Moreover, the strata evident in the west and north walls of the excavation suggest that more of this burned feature remains intact under the paved surface.

The site is of local, provincial and national significance. Given the objectives of the 2000 United States National Parks Service *Revolutionary War and War of 1812 Historic Preservation Study*, the Parliament site is also of international significance as a key site from the War of 1812. It should be recognized as such by both Canada and the United States. Clearly, the site should be secured and interpreted to the public at large.

KNISELEY FAMILY CEMETERY

Archaeological Services Inc. was contracted by Jungbunzlauer Canada Inc. (JBL) to monitor on-site construction activities for a manufacturing plant on a 90 ha parcel of land bounded by the Trillium Railway/Invertose Drive to the north, Barrick Road to the south, Elm Street to the west, and the Welland Canal to the east, in the City of Port Colborne. The monitoring was necessary in order to identify the unmarked burial plot of the Kniseley family who had owned the property in the 19th century.

The archival record for the cemetery was far from complete and it was unknown how many interments had been made. In the terms of his will, Christian Kniseley Sr.'s who was the original owner, stated that the property was to be left to two of his sons, Christian Kniseley Jr. and Jacob. Given that the census records of 1828 for these lots record that there were three males over the age of 16, and two females over the age of 16, it was concluded that Christian Kniseley Sr., his wife Anna, their sons Christian Jr. and Jacob, and one daughter Maria lived on the property. The older children had married and moved away from the family home by this time. Any deaths associated with their families would likely have resulted in burial elsewhere. It is known that Elizabeth, who died in 1827 for example, was buried at Sherkston cemetery.

Christian Jr. and Jacob remained at the family homestead. Christian Jr. was married circa 1828-30 to Anna and Jacob married Elizabeth ca. 1834. It is likely that children would have followed shortly thereafter. Archival records indicate that Christian Jr. had at least one son Owen, while Jacob had at least seven children. Any of their children, who died at a young age would probably have been buried in the Kniseley family plot. During 1837-1838, the Port Colborne area was struck by a cholera epidemic, which may have affected young family members.

Six individuals were found within the cemetery, in addition to a goat or sheep and a dog, which were perhaps family pets. All of the individuals were interred in coffins and all of the coffin nails were machine cut forms commonly used after 1830. The forensic analysis resulted in the identification of a young toddler (1±4 months), three juveniles (12 years±36 months, 10 years±30 months, 9 years±24 months) and two adults (male 35-50 years, male at least 50 years). Due to the young ages of the toddler and the children, it was not possible to determine their sex.

While it was not possible to identify the children, it is known that Christian Kniseley Sr. died in 1836 at the age of 78 and that Christian Kniseley Jr. died in 1844 at the age of 44. Given the close association that each of these Kniseley men had with the property, the fact that contemporary rural practice involved burial behind the family home, and the correlation with the ages at death of the two men, it is possible that they represent the males found in the cemetery. It is also remotely possible that members of the Neff family, who inhabited the adjoining property, were interred in the cemetery, as the two families had been neighbours since the crown patent in the late 18th century.

THE SIEGLE SITE

The Siegle site was a mid-19th century farmstead located west of Townline Road in the City of Cambridge. The property had been settled in the 1830s by the Witmer family, members of the German-American Tunkard sect, who purchased their lot from Richard Beasly. Eventually the farm was sold in 1849 to German immigrant Charles Siegle, who occupied the property with his Irish-born wife Sarah and their large family until the 1890s. During the Stage 3 assessment 3,820 artifacts were recovered from 17 one-metre square test units excavated in the plough zone across a 40 x 50 m area. Kitchen and food class artifacts comprised two-thirds of the plough zone assemblage, with whitewares dominating the ceramic artifact assemblage (n=1,306).

After the topsoil at the Siegle site was carefully removed by a Gradall, 28 cultural features were exposed, including 14 post moulds. In addition to a large rectangular root cellar that contained close to 4,000 artifacts, two large circular cisterns or reservoirs were documented. They were constructed from a thin layer of plaster packed directly into the excavated hole and smoothed on the inside. One of the features measured 217 cm (seven feet) in diameter and approximately 210 cm in depth with a conical-shaped profile and a less than 50 cm wide flat bottom. The feature fill was primarily stone rubble and subsoil with some metal scrap and two machine cut nails. It is probable that both these features acted as reservoirs for livestock watering troughs as they resembled an example illustrated in B. D. Halsted's *Barn Plans and Outbuildings*, published in 1889 (Figure 3).

THE CHAPPELL TERRACE SITE

Archaeological Services Inc. was contracted by the City of Mississauga to conduct a Stage 4 salvage excavation of the Chappell Terrace site (AjGw-222) situated on a terrace promontory on the east side of the Credit River floodplain. The site was discovered during the course of a Stage 2 archaeological assessment of the Mississauga Public Gardens in 1991(ASI 1991). During this assessment, two loci of positive test pits were encountered approximately 100 m east of the Chappell House within the highly disturbed, grass-covered lawns of the property. On the basis of the Stage 2 investigations, it was estimated that the site encompassed an area of approximately 1,600 square metres. Once it was determined that the site could not be protected during planned extensive alterations to the property, it was subject to salvage excavation.

A contiguous block of 44 units, along with two isolated units, was excavated in the small northern locus while a contiguous block of 60 units was excavated in the southern locus (Figure 4). The soil stratigraphy in both loci revealed that the artifact-laden layers were likely re-deposited during substantial early 20th century landscaping that had occurred on the property. While it is likely to have been of local derivation, the original location of the artifact-bearing soils within the immediate site area could not be ascertained.

Following the hand excavations within both loci, the topsoil was removed from the remaining portions of the site, revealing only two post moulds, and a single pit feature, all of which were found in the northern locus. Separated from one another by a distance of approximately 50 cm, these posts measured 10 and 13 cm in diameter and 29 and 24 cm in depth, respectively. The comparatively large

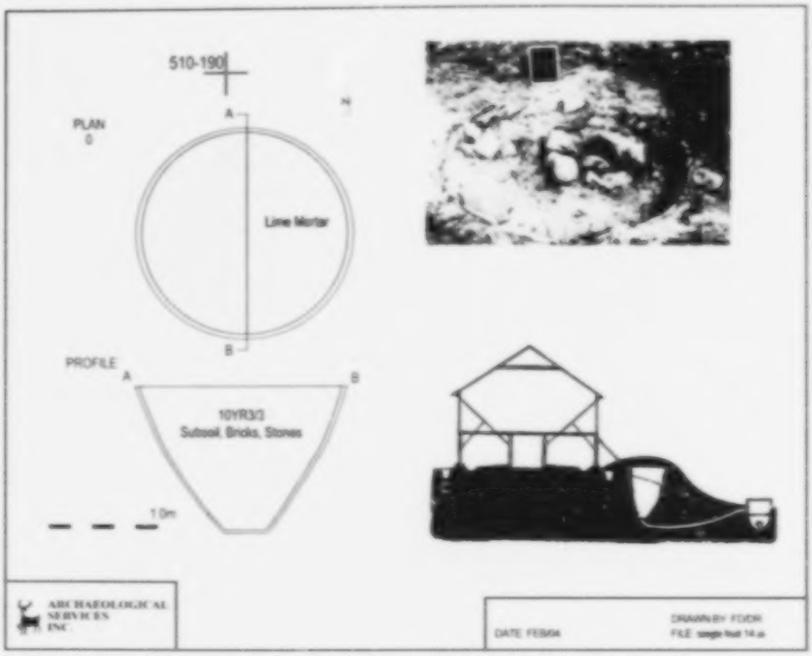

FIGURE 3. Sketch of a below-grade cistern (centre) from Halsted (1889:57), together with the plan and profile of one of the Siegel site features.

size of these posts may indicate that they represent the remains of the supporting elements of a structure. The feature, a small, sterile, ovate pit, was encountered approximately six metres to the southeast of the post moulds.

Over 8,700 artifacts were recovered from the site, the majority of which consisted of faunal remains (3,812 items), small ceramic sherds (2,765), and flaked stone tools and debitage (2,131).

The pottery sample included portions of 17 identifiable vessels, including 11 Huron and Lawson Incised types (65%), two Niagara Collared, two Dutch Hollow Notched type vessels, and one Sidey Notched type vessel. A single Pound Necked type rim was recovered during the 1991 assessment of the site. If one accepts that the decreasing presence of neck decoration is one of the more reliable chronological indices of 14th through 15th century assemblages (Wright 1966:71; Ramsden 1977:184; Robertson and Williamson 2003:34-36), the vessel types represented in the sample suggest that the site likely represents a Late Iroquoian component dating to the first half of the 15th century. The ceramic pipe assemblage, which included three plain trumpet, two conical, two unidentifiable effigy, one coronet and one juvenile bowl fragments, also fits comfortably with a temporal estimate of the early 15th century A.D.

Overall, the vessel rims in the sample were found to be derived from relatively small vessels, by comparison with those found at the roughly contemporaneous Parsons site, a large Iroquoian village site located on the Humber

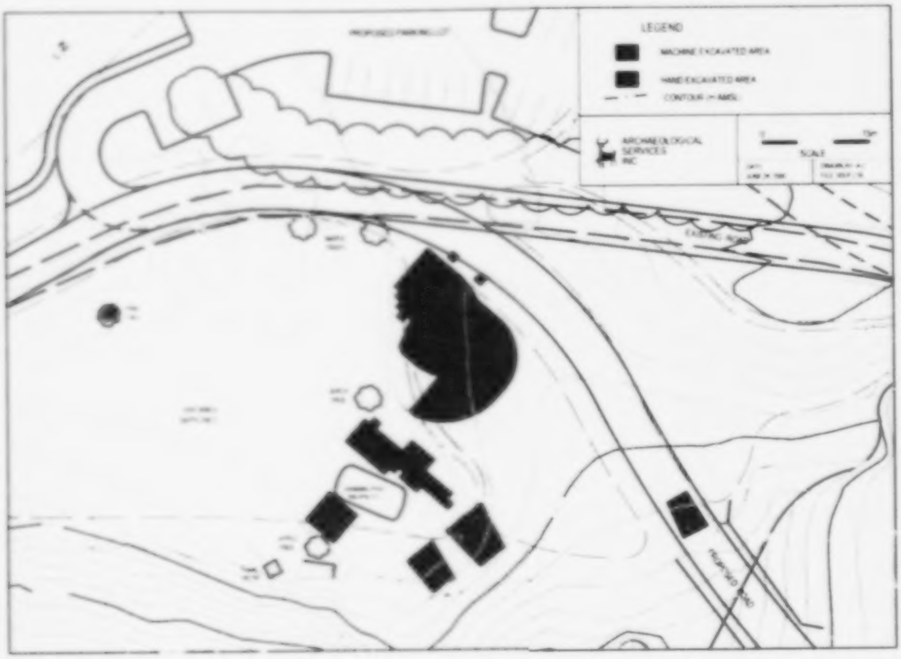

FIGURE 4. Plan of the 2000 excavations at the Chappell Terrace site.

River, which represents the closest mid-15th century Late Iroquoian village to be published upon in detail (Williamson and Robertson [ed.s] 1998). This is consistent with the likely function of the Chappell Terrace site as a seasonal or short-term settlement occupied by a task group from a nearby agricultural village. Unless the occupation of the Chappell Terrace site extended throughout the spring and summer, it is unlikely that vessels were manufactured on the site. Vessels that were portable would have been more desirable among a small, mobile task group than large storage or cooking vessels that could only be moved from one site to another with difficulty.

An unusual ceramic artifact (Figure 5) was recovered that does not appear to be derived from either a vessel or smoking pipe (adult or juvenile). This item consists of a single piece of clay that has been folded around a reed or stick to form a shallow trough. Little effort was made to smooth the interior surfaces although the exterior is lightly burnished. The item was

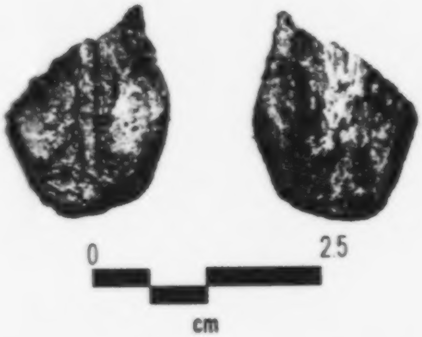

FIGURE 5. An unusual ceramic artifact from the Chappell Terrace site, possibly part of a toy boat.

made from well-knit clay, however, temper is limited to a few pieces of extremely coarse grit. In respect to its overall form, the item resembles a series of objects identified as toy dug-out canoes that were recovered from the Finch site, an early late Iroquoian special purpose site located in southwestern Ontario (Pihl and Thomas 1997:57). While similar boat-shaped items have been identified as smoking pipe fragments (Mathews 1982), no residues or carbon encrustations appear on any of the interior surfaces of the Finch or Chappell Terrace specimens, so they probably were not derived from functioning pipes.

The flaked stone sample includes one complete projectile point, three fragmentary points, four complete and 18 fragmentary bifaces, a complete end scraper, a drill fragment, an unusual unifacial tool, three cores, and 2,096 pieces of debitage. The single complete projectile point recovered from the site is an isosceles triangular Late Woodland specimen. The preponderance of retouch flakes among the debitage and a concomitant dearth of cores, core fragments and core reduction flakes, suggests that tool refinement or re-sharpening were the dominant knapping activities at the site.

The assemblage also consisted of a total of 3,812 bones, the majority of which were mammal. Eleven taxonomic groups are represented by the 259 specimens identified to order or taxa, with 228 elements or 87.69% of the identified bone being white tailed deer (*Odocoileus virginianus*). The deer body part representation in the assemblage is consistent with carcass reduction for drying or smoking meat for transport to a permanent settlement, along with the more industrially important skeletal elements. Dog (*Canis* sp.), beaver (*Castor canadensis*), muskrat (*Ondatra zibethicus*), grey squirrel (*Sciurius carolinensis*), eastern chipmunk (*Tamias striatus*), and possible moose (*Alces alces*) were also identified. One fragment each of Canada goose (*Branta canadensis*), and catfish (*Ictalurus* sp.), were also represented. A total of 27 worked pieces of bone was recovered, seven of which were made from deer elements, 18 from unidentified mammal bone, three from bird bone, and one from half a bivalve shell. Six awls, four beads and a possible pendant were among the material identified.

Although the Middle Iroquoian period marks a stage in Iroquoian cultural evolution characterised by fully developed corn-bean-squash agriculture and perhaps even intensification of food production (van der Merwe et al. 2003), subsistence-settlement systems continued to include seasonal resource extraction sites. While many types of Iroquoian special purpose sites have been identified in southern Ontario, including agricultural cabin sites (Pearce 1983; Williamson 1983; Lennox [ed.] 1995), fishing sites (Pendergast 1969; Smith 1979), and hunting-related sites such as deer drives (Williamson 1986) or the temporary base camps for fishing and hunting parties (Lennox [ed.] 1995; Pihl and Thomas 1997), only a few such occupations have been documented in extensive detail in the Greater Toronto Area (e.g., Pearce 1995, 1997).

The artifact assemblage suggests that the site represents the remains of a seasonal base camp, the most visible focus of which was the procurement and processing of deer, an important source not only of meat, but of hides for clothing and bone for tool manufacture. While autumn is considered the most auspicious time for deer hunting (Keene 1981:104), the nature and volume of domestic material recovered from the site suggest that it was occupied for a longer period of time than just the fall hunting season and for other resource extraction purposes that were carried out by a variety of people.

Indeed, the site yielded the full spectrum of artifact types that are found on larger semi-permanent villages, including those that archaeologists have traditionally assumed were primarily made or used by women on the one hand (e.g., ceramic vessels, bone artifacts) or men (e.g., smoking pipes, projectile points) on the other. Moreover, the recovery of juvenile ceramic vessel sherds and, perhaps, a ceramic toy boat makes it equally clear that children were also present at the site. It is probable that these men, women and children constituted one or more nuclear families engaged in protracted resource gathering activities on behalf of the extended family or the larger community to which they would have returned at the end of the season.

If the Chappell Terrace site did, in fact, serve as base camp for hunting and other resource collection parties setting out from a permanently occupied village, it remains to be determined where that parent community was located. The site lies in an isolated position on the lower reaches of the Credit River. This apparent isolation, however, is more likely to be a consequence of extensive and rapid development within Mississauga to the south of Highway 403 prior to the implementation of planning policies concerning archaeological site conservation, combined with a lack of large scale research surveys in the general region, rather than a true reflection of the actual distribution of Iroquoian populations.

The closest Late Iroquoian village site to Chappell Terrace is the early 15th century River site (AjGw-68), which lies approximately 10 km upstream on the west side of the Credit and the roughly contemporaneous Pengilly site (AjGw-66), which is located roughly 500 m southwest of River, also on the west side of the Credit, and thought to represent a series of camps or hamlets (Poulton 1986:22). The position of Chappell Terrace and the other lower Credit River sites with respect to the more broad scale socio-political developments of the Iroquoian period cannot be resolved in the absence of more comprehensive research in the area.

THE ROBB SITE

The Robb site (AlGt-4) is a roughly two hectare Iroquoian village site dating to the early to mid-14th century A.D. located in the Town of Markham. Limited excavations in the northernmost, wooded, portion of the site along the edge of the Miliken Branch tributary of the Rouge river were completed by the Ontario Archaeological Society in the 1950s and by the University of Toronto in the 1960s. The proposed development of a housing subdivision necessitated comprehensive salvage excavation of the remaining site area.

The site was relocated during the course of the Stage 2 archaeological assessment of the property (ASI 1998), at which time a controlled surface collection of the east portion of the site, previously examined by Kapches (1981), was carried out. A total of 150 surface artifacts was discovered, distributed over an area of approximately 1.8 hectare. It should be noted that the east portion of the site had been used for sod cropping for over 30 years. Given the results of test excavations in the fenceline separating the east and west portions of the site, it is estimated that almost 50 cm of soil had been removed from the east field, truncating or entirely removing all but the deepest cultural features. A controlled surface collection of the smaller west portion of the site yielded only 13 artifacts.

Upon the removal of topsoil by Gradall, five complete longhouses, ranging from 40 to 60 m in length, and portions of four others were documented (Figure 6). Houses 1, 3, 7 and 8 and Houses 9, 4, 2 and 5 formed two, distinct aligned groupings while House 6 lay parallel to the edge of the creek valley. The south end of House 6 had been destroyed by earlier grading and filling in an attempt to fill in a low, wet swale in the field. The settlement was not enclosed by a palisade. More interior features and posts were encountered in Houses 8 and 9, in the west field, than for those houses in the east field, suggesting that agricultural activities in the west field were not as damaging.

A rich and comparatively undisturbed midden was encountered to the immediate south of House 1, within the fenceline. In total, 117 one metre square units were hand excavated within this deposit and all soils were screened through

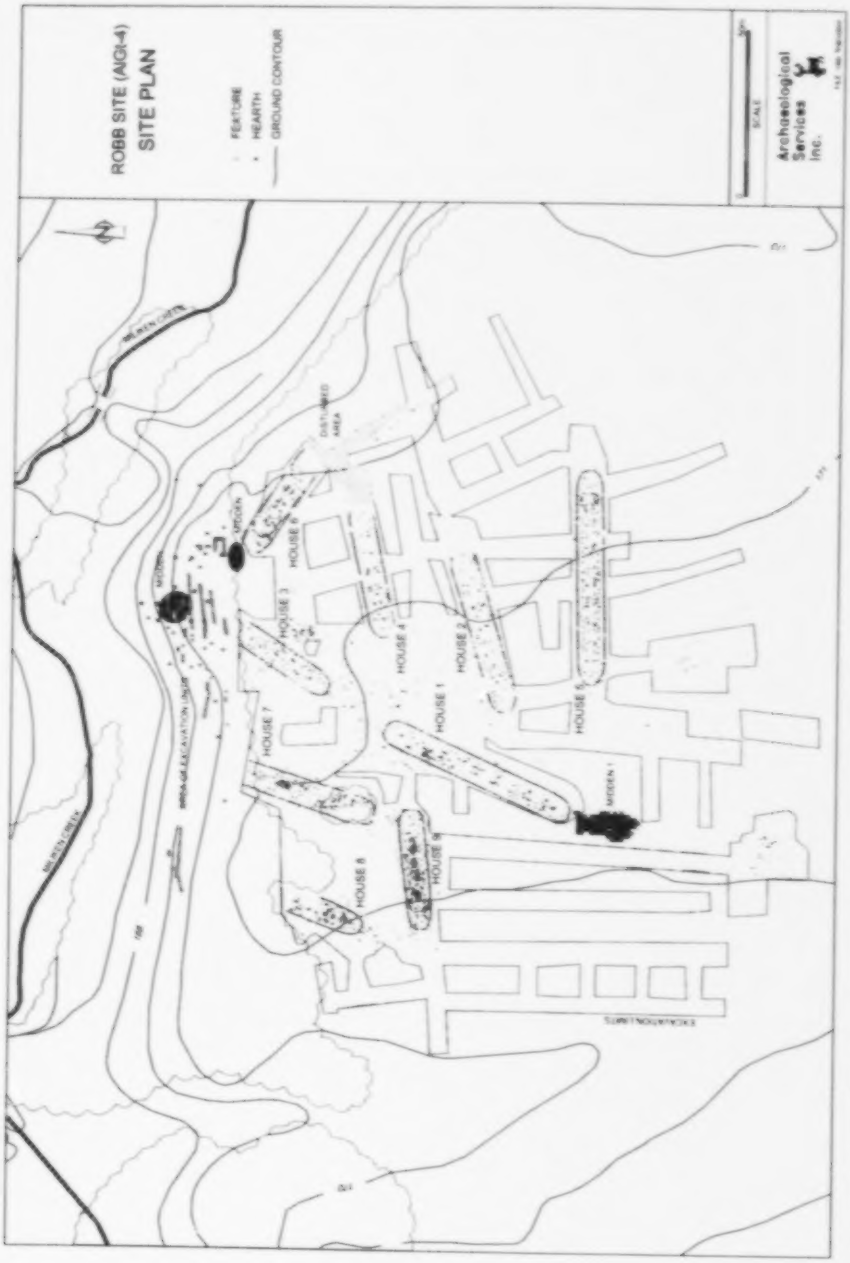
ROBB SITE (AlGl-4)
SITE PLAN
FEATURE
HEARTH
GROUND CONTOUR
SCALE
Archaeological Services Inc.
DISTURBED AREA
MIDDEN
HOUSE 6
HOUSE 3
HOUSE 4
HOUSE 2
HOUSE 5
HOUSE 7
HOUSE 1
MIDDEN 1
HOUSE 9
HOUSE 8
AREA OF EXCAVATION UNITS
EXCAVATION LIMITS

FIGURE 6. Plan of the 2000 excavations at the Robb site.

six-millimetre mesh. The highest yielding unit produced over 800 artifacts, although recovery rates dropped drastically as one moved away from the centreline of the fence.

The northern wooded portion of the Robb site was not subject to comprehensive investigation in 2000, although some effort was made to determine the extent of the archaeological deposits within this portion of the site. These lands were test-pitted at five metre intervals followed by the excavation of several one-metre square test units in order to assess the richness of the remaining deposits. Based on the recovery of over 470 artifacts from one unit, significant deposits remain within this area. The bed of the creek itself was also investigated, resulting in the recovery of an appreciable number of artifacts which appear to have eroded from its banks. It should be further noted that another extensive midden deposit was encountered while stripping at the north end of House 6.

The north portion of the site within the forested area represents a significant archaeological resource, which if not protected, will require extensive excavations.

THE ALEXANDRA SITE

The Alexandra site (AkGt-53), a previously unknown Iroquoian village, was discovered within a cultivated field during the course of a routine pre-development assessment in northeastern Toronto, adjacent to a small stream and wetland associated with Highland Creek. Salvage excavations of the site were begun in the fall of 2000 and completed in 2001.

A controlled surface collection of the site resulted in the recovery of approximately 500 artifacts distributed over an area of approximately 1.2 hectares. Three particularly dense surface concentrations of artifacts encountered during the controlled surface collection proved to be middens, which were hand-excavated in one metre units. Between the three middens, a total of approximately 400 one metre units was excavated.

The balance of the site was investigated through use of a Gradall to remove the plough zone. A total of 17 structures was documented at the site (Figure 7), of which 15 are likely to represent permanent or year-round dwellings (the structures designated as Houses 4 and 15 are thought to represent temporary features such as sheltered activity areas). The houses at the southern end of the village (Houses 8, 9, 11, 12, 13, 14, 16, and 17) are likely to have been established early in the history of the settlement, as these structures are associated with many of the earliest ceramic types recovered from the site and many of the structures exhibit evidence of frequent rebuilding. Houses 1, 5, 6, 7, and 10 appear to have been constructed later in the occupation sequence, and may represent an influx of new members to the community, as it is likely that the houses to the south continued to be occupied. When Houses 2 and 3 at the northern extreme of the site were occupied relative to the rest of the village is unclear at this time. It is interesting to note, however, that these houses are separated from the rest of the occupation area by a series of slight fences. It is possible that they played a key, intermediate role in the ultimate expansion of the village.

Over 600 sub-surface cultural features, within and between the houses, including some 40 semi-subterranean sweat lodges were excavated at the site, and approximately 19,000 artifacts were recovered. On the basis of our investigations it would appear that the occupation of the site spanned much of the mid- to late fourteenth century, within the late Middle Iroquoian period.

THE BAKER SITE

The Baker site (AkGu-15) is an early 15th century A.D. Iroquoian settlement which encompassed an area of approximately one hectare. Although the site, located in the City of Vaughan within the West Don River watershed, had been known to Toronto-area

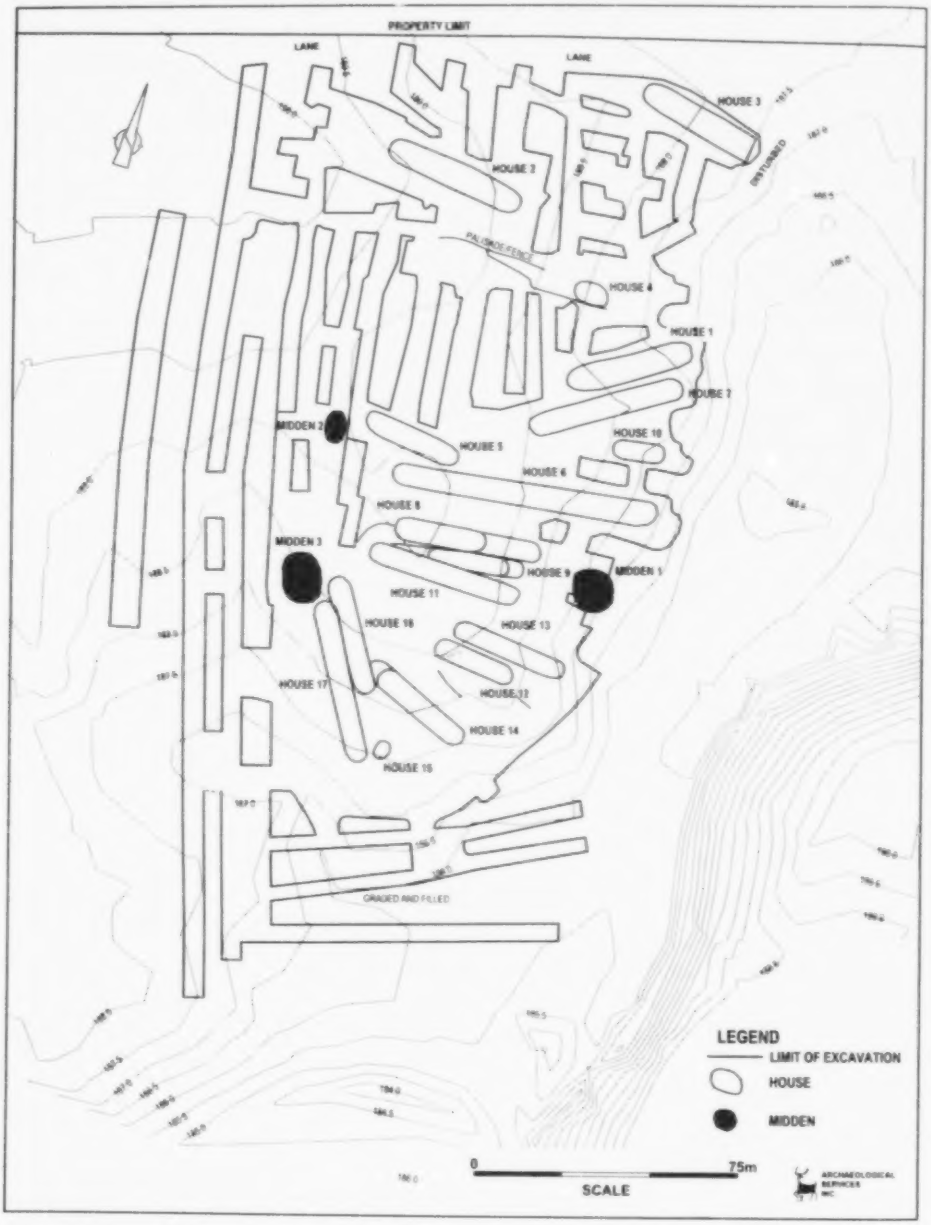
PROPERTY LIMIT
LANE
LANE
HOUSE 3
DISTURBED
HOUSE 2
PALISADE/FENCE
HOUSE 4
HOUSE 1
HOUSE 7
HOUSE 10
MIDDEN 2
HOUSE 5
HOUSE 6
HOUSE 8
MIDDEN 3
HOUSE 9
MIDDEN 1
HOUSE 11
HOUSE 18
HOUSE 13
HOUSE 17
HOUSE 12
HOUSE 14
HOUSE 15
GRADED AND FILLED
LEGEND
LIMIT OF EXCAVATION
HOUSE
MIDDEN
0
75m
SCALE
ARCHAEOLOGICAL SERVICES INC

FIGURE 7. Schematic plan of the 2000 excavations at the Alexandra site.

researchers since the 1970s, it had never been formally examined until the land on which it was located was scheduled for development.

The site was located in an agricultural field on a southwest-facing slope overlooking a series of minor creeks. A controlled surface collection resulted in the recovery of approximately 300 artifacts that were generally evenly distributed throughout the site area. Removal of the plough zone, using a Gradall, resulted in the exposure of four longhouses and three associated middens (Figure 8). The settlement was not palisaded. The houses ranged from 20 to 85 metres in length, forming a single aligned cluster that was oriented parallel to the slope. The easternmost house was located somewhat in isolation on the opposite side of a relatively deep swale that ran through the site. It is possible that this may have been a seasonally active watercourse at the time the site was occupied. Despite the variability in the sizes of the four structures, all appear to have been intensively occupied. The site would therefore appear to represent the remains of a small settlement within the West Don in the period shortly before the community amalgamations that led to the rise of large, heavily defended villages on the South Slope of the Oak Ridges Moraine in the mid- to late 15th century, as more rigidly structured local tribal systems began to coalesce (e.g., Finlayson 1985; Robertson and Williamson [ed.s] 1998).

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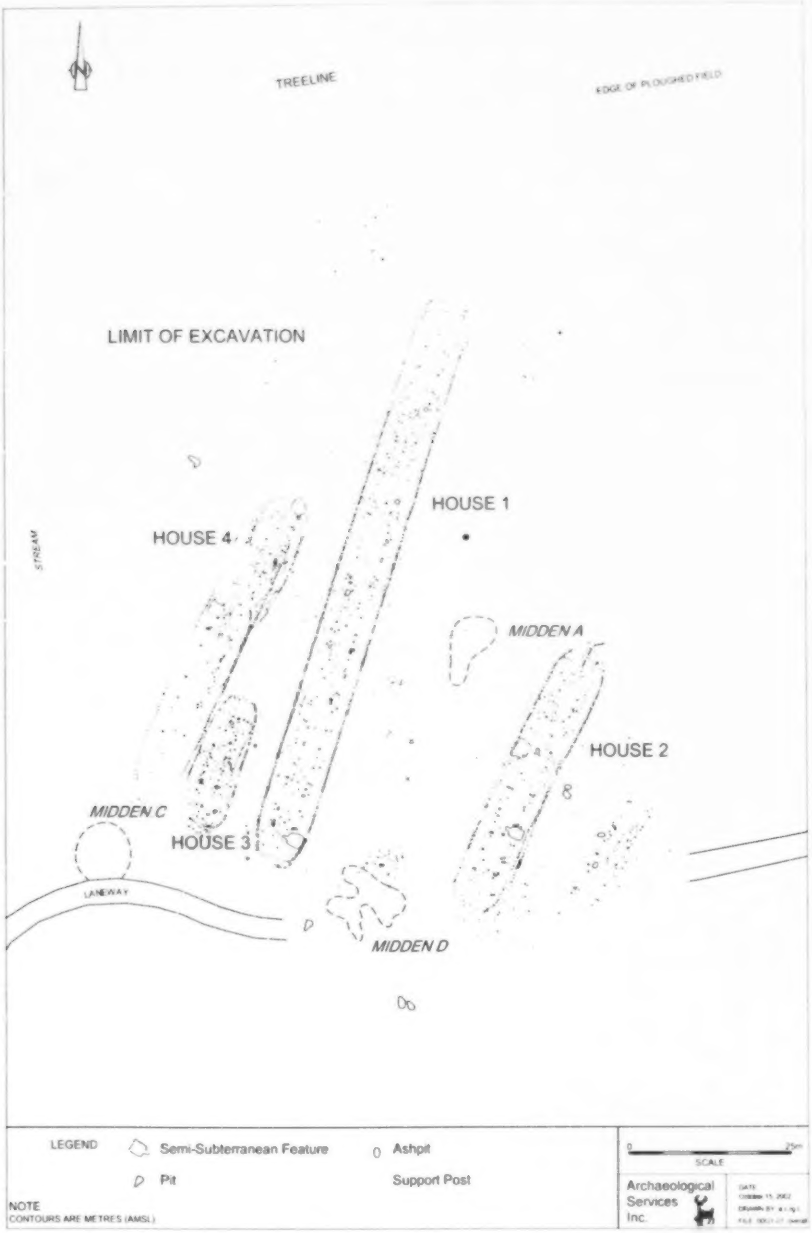
N
TREELINE
EDGE OF PLOUGHED FIELD
LIMIT OF EXCAVATION
STREAM
HOUSE 1
HOUSE 4
MIDDEN A
HOUSE 2
MIDDEN C
HOUSE 3
LANEWAY
MIDDEN D
LEGEND
Semi-Subterranean Feature
Ashpit
Pit
Support Post
NOTE
CONTOURS ARE METRES (AMSL)
0
25m
SCALE
Archaeological Services Inc.
DATE

FIGURE 8. Plan of the 2000 excavations at the Baker site.

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FIELD SCHOOLS:

CATARAQUI ARCHAEOLOGICAL RESEARCH FOUNDATION 2000 FIELD SCHOOL: FORT HENRY GARRISON HOSPITAL

SUSAN M. BAZELY

INTRODUCTION

In 2000 the Cataraqui Archaeological Research Foundation had an opportunity to form a four-way partnership with the "*Can You Dig It?*" Summer archaeology camp. It continued to be offered to students of all ages in order to fulfil part of the Foundation's education mandate. The project was the first season of excavation on the site of the Garrison Hospital at Fort Henry National Historic Site (NHS) and involved Fort Henry (operated by the St. Lawrence Parks Commission), Parks Canada (owner of Fort Henry NHS), the Limestone District School Board, and the Foundation. Archival research and excavations during the summer of 2000 raised many questions about the use of the hospital compound throughout the 19th and early 20th centuries and subsequent use of the property through the early and mid 20th century.

FORT HENRY GARRISON HOSPITAL 131H (BbGc-28)

HISTORICAL BACKGROUND

After the war of 1812 a hospital was built to serve the garrison and early cartographic evidence of structures in the area dates to 1816 (National Map Collection (NMC) 11378), but it is unclear whether these are the hospital buildings. A Government contract advertisement on March 1, 1822 (Kingston Chronicle) calls for proposals:

> "Government Contract
> Proposals will be received on the 15th inst. for building an Hospital on Point Henry, agreeably to a plan and specification which may be seen at the Royal Engineer's Office, between the hours of 12 and 3 o'clock, after the 7th instant. The building to be completed by the 25th December next. Two approved securities will be required to the amount of the Contract.
>
> W.R. PAYNE,
> Capt R. E. Commanding."
> (Kingston Chronicle (Weekly), March 1, 1822 p.3)

Without the contract it is impossible to tell whether the hospital was constructed at that time or if any other related structures were part of that contract. The first definitive map evidence is 1827 (NMC 22957) which illustrates a structure consistent with the shape and location of the hospital, but nothing represents the existing Guard House or other structures his-

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370 King Street West
Kingston, ON K7L 2X4

torically associated with the hospital. An 1829 illustration by Major-General James Pattison Cockburn shows the hospital and surrounding picket fence with the fort in the background. Not until 1830 are other features of the compound including the Guard House and Dead House clearly identified in the Annual Ordnance Return for Kingston on a "Plan of the Military Hospital at Point Henry, Kingston Upper Canada" (Figure 1). Also illustrated are the Straw Store and Well.

The 1831 Ordnance Report refers to a small wooden house located ". . . on the Ordnance Reserve, Point Henry, near the New Military Hospital . . ."(NAC, RG8II, Vol. 31). The Kingston Chronicle of October 1, 1831 contains an advertisement:

> "CONTRACT for ENGINEER work.
> NOTICE is hereby given, that sealed Tenders, with the names of Sureties, will be received at the Commissariat Office at this Post, until 12 o'clock, on the 10th proximo, from such persons who will undertake to perform the undermentioned services for the Royal Engineer Department, viz;
> To re-Shingle the Roof of Office's Barrack at Point Frederick.
> To re-Shingle the Roof of the Quarter occupied by the Officer commanding Royal Artillery, Kingston.
> To re-Shingle the Roof of the old Hospital in Kingston,
> and to paint the exterior wood work of the Quarter occupied by the Officer Commanding Artillery
> - the Commandant's House in Kingston
> - the New Hospital at point Henry - and the Officer's Barrack within the Tete du Pont at Kingston.
>
> All particulars will be made known on enquiry at the Office of the Royal Engineers.
>
> The several sums will be paid in British Silver, after the rate of 4s. 4d. sterling, per Dollar, upon drafts drawn by the Ordnance Storekeeper - and the Tenders must express the Rates in sterling money.
>
> JNO. HARE, A.C.C.
> Commissariat Kingston,
> 28th September, 1831."
> (Kingston Chronicle, Oct. 31, 1831)

These documentary sources suggest a later construction date than indicated by cartographic data. The same Ordnance Report contains a detailed description of the Hospital:

> "A stone building 83 x 29 and 35 in width at the wings. It is three stories high and built of hammered stone. The front has an area in which is a cellar and privies. The hospital contains on the ground floor a bath room, surgery mens room, kitchen and two store rooms. On the second floor there are 3 wards, a surgery and medical officers room, on the upper floor are two wards. It is fitted up for 37 patients. The hospital is enclosed by a picket fence and at the main gate there is a stone guard[house]."

The Guard House is identified as:

> "14 x 15 for a Corporal's Guard and near this little building is another building 14 x 30 fitted up for a dissecting and dead room and straw store, both these buildings have shingled roofs."
>
> (NAC, RG8II, Vol. 31).

Currently little is known of the use and occupation of the structures within the Hospital compound until 1871. After Canadian Confederation in 1867, the British Military were withdrawn by 1870. At this time,

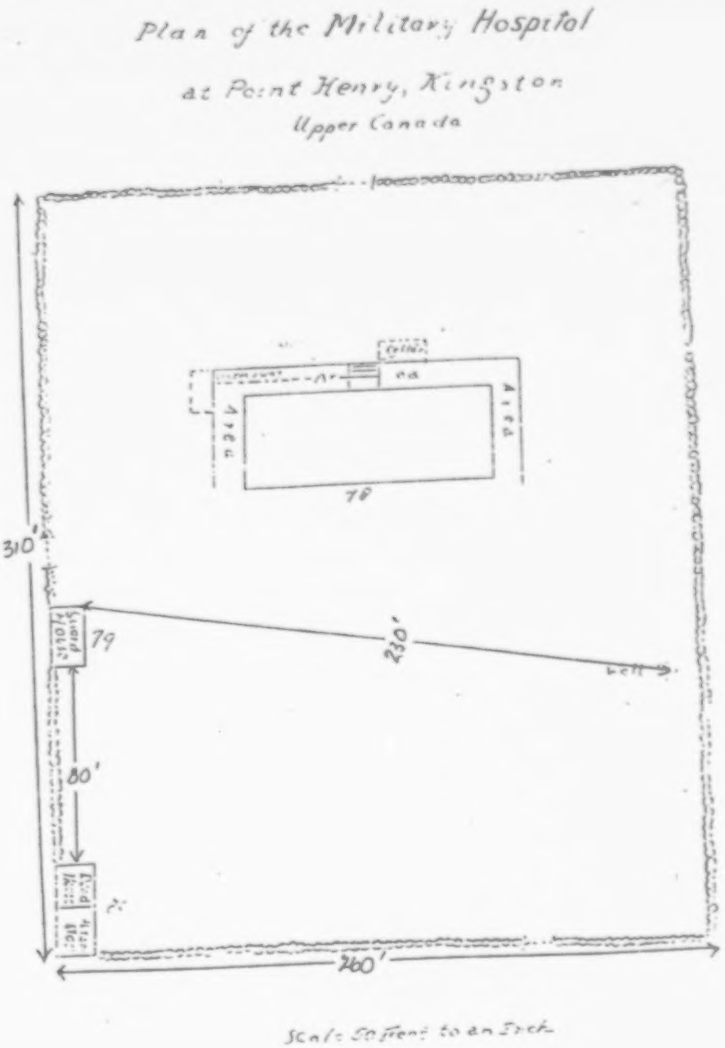
Plan of the Military Hospital
at Point Henry, Kingston
Upper Canada
Area
Area
78
310'
Guard House
79
230'
80'
260'
Scale 50 Feet to an Inch

FIGURE 1. 1830 plan showing hospital compound. NAC.

carefully prepared plans (H4/450 Kingston) detailed the condition of all structures to be handed over. The Hospital Store of stone had one storey, no basement or attic, a shingle roof and was in good repair. The Dead House, also of stone, one story, with no basement or attic, had a shingle roof and was in a state of good repair. The Guard House, built of stone, had similar qualities as did the Men's Privies. The Hospital, also of stone, had a centre of three, and two wings of two stories with no basement or attic indicated. It was in a state of good repair with a tin roof. In the 'Remarks', the Hospital is noted as being for 19 patients with a Kitchen, wash house and Sergeant's Quarters on the ground floor. From 1871 to 1883 "A" and "B" Battery of Garrison Artillery occupied Fort Henry, later the Regiment of Canadian Artillery, they remained at the Fort until 1891 (Grenville et al 2000: 105). The Hospital was in use during this twenty year period as the Artillery Letter Book (ALB) for January 7, 1885 notes "Fort, Hospital and towers occupied and need fuel and light ration" (NAC, ALB, No. 3, p. 74, from Mecredy's notes, Fort Henry Archives). No mention is made of the Guard House and Dead House.

In 1902 Cadets from the Royal Military College of Canada used the Hospital grounds for encampment, but both the Guard House and Dead House are out of view. Another photograph possibly from the same period, shows an addition to the east side of the Guard House. While the Dead House is not standing at this time, the photograph provides a visual relationship of the Hospital Compound to the surrounding landscape, and the larger military site of Fort Henry. Several early 20th century photographs depict the Hospital and Guard House during a period when the Canadian Military leased land for summer cottages, between ca. 1912 and 1936. The Guard House and addition were subsequently incorporated into cottage life.

The Hospital burned in 1924. Accounts of the mishap in the November 17 issues of the *Kingston Daily Standard* and the *Daily British Whig* illustrate concern for the cottages.

> "OLD MILITARY HOSP. WENT UP IN FLAMES
> Barriefield Landmark Completely Gutted This Morning
>
> The old Military Hospital, facing the lake on Barriefield, was completely gutted by fire this morning, and nothing now remains except the walls. The fire was first discovered, at about 10 a.m., word being immediately telephoned to Military Headquarters, who instructed the O.C., R.C.H.A., to send a detachment of men to the scene of the fire in order to prevent it from spreading. Twenty-five men from the R.C.H.A. Brigade were immediately sent, and this party successfully prevented the flames from spreading to the other buildings in the vicinity, and through the grass to the bush, then men and a non-commissioned officer being still at the scene of the fire at the time of going to press.
>
> The origin of the fire is as yet unknown, but it is thought that some person had been sleeping in the lower part of the building and owing to the sudden cold . . . had lighted a fire which sp[read thr]ough the floors and wood . . . ons with great rapidity.
>
> Owing to the fact . . . [build] ing had not been use[d] . . . years, and had been a[bandoned?] . . . [prac]tically go to ruin th[e] . . . [bri]gade were not called . . . in fighting the flames, . . . Armstrong was on hand . . . preventing the spread o[f] . . ."
>
> (Kingston Daily Standard, Nov. 17 1924)

> "THE OLD MILITARY HOSPITAL IS BURNED
> It is Thought That Tramps Were Responsible for the Fire
>
> The old military hospital building, located on the shore of Dead Man's Bay, about a mile and a half from the city and unoccupied for years, was gutted by fire on Monday morning. The building which is a stone structure, was used about fifty years as a hospital for the permanent troops which were stationed in Kingston. At one time it was used as an isolation hospital.
>
> About 10.30 o'clock the fire was first noticed, and the city department was

> asked to send some men over. When the firemen arrived it was clearly seen that the blaze had been underway for some time, as the two wooden floors and the roof of the building had taken fire. Before long the roof fell in. The brick fireplaces and the chimney also collapsed.
>
> Although no person knows the cause of the fire, it is supposed that some tramps spent the night in the building and left a lighted fire on the floor.
>
> A number of Kingstonians, who have summer camps in that locality were called but there was very little danger of any of their buildings taking fire as the wind was blowing in the direction of Cedar Island. The Y.W.C.A. summer home was the closest to the scene of the blaze. C.S. Anglin, whose camp is next to the "Y" camp, went over to see that his cottage was alright."
>
> (Daily British Whig, Nov. 17 1924)

The cottage phase ends with the commencement of the "Great Depression" restoration of Fort Henry in 1936. The cottages were torn down and it is assumed that the addition to the Guard House was removed and any required restoration undertaken. The 1936 plans include as found drawings of the Hospital, suggesting that it was to be part of the restoration project. The shell of the Hospital remained until ca. 1941 when the Canadian army removed it to prevent use as a hiding place for potential escaping German Prisoners of War interned at Fort Henry (Mecredy, personal communication, August 2000). Throughout the remainder of the 20th century the Guard House was used sporadically for storage. A parking lot built over the Hospital site can be traced through aerial photography of the 1960s.

ARCHAEOLOGY AT THE GARRISON HOSPITAL

Archival research and a ground penetrating radar survey conducted in 1999 (Bickerton et al 1999) assisted in selecting test areas. Three discrete locations were investigated in 2000: the general vicinity of the hospital structure; the Guard House structure and immediate vicinity; and the location of the Dead House.

Excited by the find of metal roofing directly below a collapsed brick wall, and intact evidence of the fire, the exact location of the hospital remained unknown, but it was clear that it was close. To improve safety in a nearby unit an additional unit was opened up, and it slowly uncovered the west wall of the hospital (Figure 2). The dominant artifact types are ferrous including nails and roofing fragments, and two Royal Canadian Artillery buttons. There were also large amounts of bottle glass, much of the 20th century variety. No evidence of pre-fire occupation and use of the hospital were encountered.

At the Guard House it was a different matter, the building is extant. At the southeast corner it was unclear how much impact the addition to the Guard House had on evidence of earlier occupation, but there was clearly some disturbance. Fragments of a Royal Regiment of Artillery shako badge (Figure 3) were recovered here. Referred to as the Regency pattern, it dates from 1816 to 1828 (Chuck Bradley, personal communication). Buttons of the 34th Regiment of Foot or Border Regiment and 43rd Regiment of Foot or Oxfordshire and Buckinghamshire Light Infantry were also recovered in this area. Both regiments remained in Kingston for only a month, the 43rd in June 1838, travelling by the Rideau Canal, and the 34th in May 1841 (Stewart 1964: 179, 205). Royal Artillery buttons from the Victorian period were excavated on the south side of the Guard House. On the north side, close to the existing door, an 1844 Bank of Montreal Half Penny token was recovered. These date from the earliest period of the hospital through its British military use.

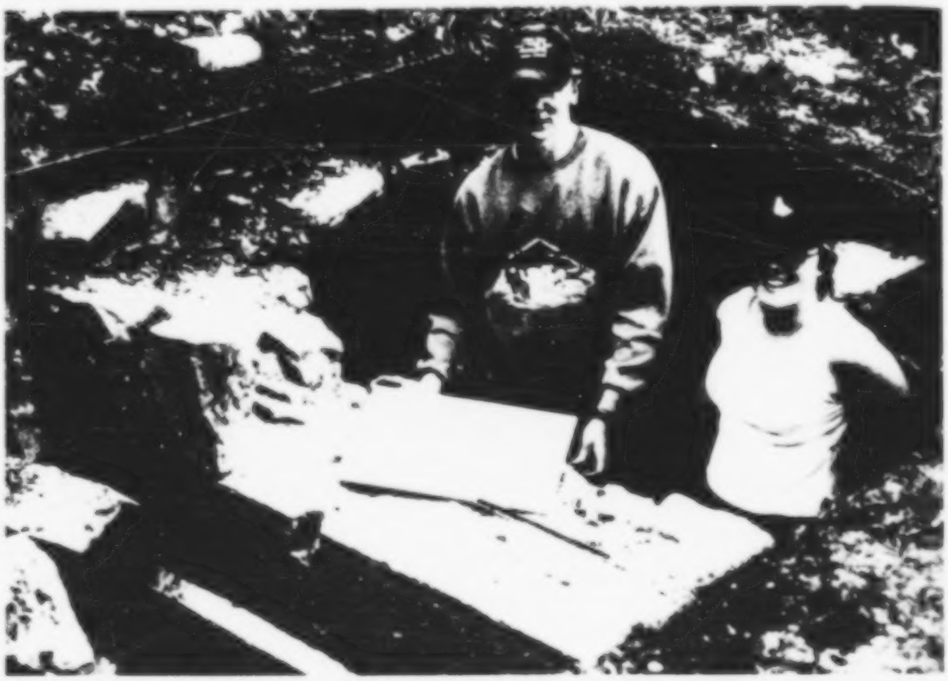

FIGURE 2. FOCUS program students recording west wall of hospital.

Other interesting artifacts that illustrate a multi-period, mixed use of the site are some personal favourites, a golf club fragment and parts of a flashcube. Of the artifacts recovered from the exterior of the Guard House the dominant types are metal including nails and other hardware items. Some ceramics were encountered, which fit the British military period well and include a small amount of pearlware, larger quantities of refined white earthenware, and small amounts of vitrified white earthenware. The largest quantities of smoking pipe fragments were recovered from around the Guard House, perhaps an indication of a common past time? Again, there are large amounts of bottle and window glass. Evidence of occupation at the Guard House, while somewhat disturbed, contained the strongest elements of the military period from the site.

The final area to be investigated was the Dead House. This was perhaps the most impacted by cottage and picnic activities and provided very little cultural material to assist in interpreting its use over time. Most of the recovered material consists of modern nails and bottle glass.

There has been a great impact on the hospital remains caused initially by the fire and the subsequent demolition of the building. It is likely that pockets of evidence of the occupation and use of the hospital remain hidden below the rubble. Excavated evidence has provided a specific location for the hospital, so additional investigations can be further refined. The exterior of the Guard House has provided the best occupation evidence during the military period as well as information on the condition of the foundations of the structure. Investigations at the Dead House illustrate that it was not in use for an extensive period as compared to the other two structures. The "clean" nature of the area suggests that either cottaging activities and sub-

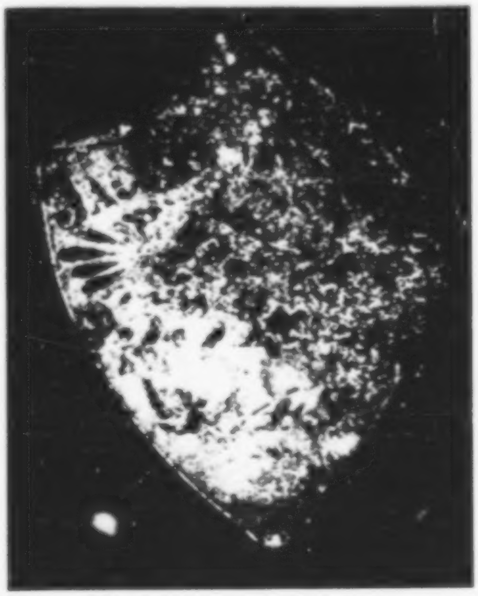

FIGURE 3. Fragments of Regency period artillery shako badge. M. Berry.

sequent scrounging completely removed all cultural material related to its use or the use itself left behind little or no material evidence. There is no doubt that the physical isolation of the hospital compound put severe limits on the site formation processes that allow significant accumulations of cultural material.

ACKNOWLEDGEMENTS

This project was the result of discussions and cooperation between several organizations and individuals on behalf of those groups. Thanks are due to staff of Fort Henry National Historic Site especially Manager John Robertson, Curator Ron Ridley, Program Co-ordinator Mark Bennett; Parks Canada Area Superintendent John Grenville, Military Sites Archaeologist Joe Last, Material Culture Researcher Chuck Bradley and Historian Dennis Carter-Edwards; Limestone District School Board Focus Program in particular Kingston Collegiate and Vocational Institute teachers Joanne Whitfield and Doug Williamson. Appreciation and thanks to the instructors Michelle Moore, Ann Cooper and Christine Walker, and assistants Nic Martin and Dan Bosworth. Also to the participants of the "*Can You Dig It!*" and *Focus* programs, without their contribution we would not be as knowledgeable.

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NMC 11378
NMC 22957

TRENT UNIVERSITY 2000 FIELD SCHOOL

SUSAN M. JAMIESON

INTRODUCTION

The Bark site (BbGp-12) is located west of the Village of Mount Pleasant, Peterborough County, within the Peterborough Drumlin Field till plain (Chapman and Putnam 1973:280). The site is situated in an area of low relief at an elevation of ca. 200 metres above sea level near a variety of resource-rich ecosystems. The northern edge of the site abuts the base of a drumlin and other such landforms lie to the west and at a greater distance to the south-southeast. To the immediate northwest and west the inter-drumlin ground is swampy, while to the south and southeast there are natural artesian springs which, coupled with inter-drumlin swamp, form the headwaters of Jackson Creek. Jackson Creek flows northeast into the Otonabee River and thus forms part of its watershed. Soils in the site vicinity have developed on drumlinized calcareous glacial till. They are classified as Otonabee Sandy Loam and, although thin, can produce good crops (Gillespie and Acton 1981:22).

Aboriginal occupation at the site was first discovered in 1983 when sloughing brought to light human remains and variations in soil colour similar to those from ash and midden deposits at the adjacent Wilson site (Don Bark, personal communication 1997). Dr. Mima Kapches of the Royal Ontario Museum immediately surface collected and mapped the site, recorded the location of exposed features (including middens, pits, and hearths), and excavated several 1 by 1 m test units to subsoil. With the approval of Curve Lake, Hiawatha, and Scugog First Nations, Kapches mapped and removed human remains from the plough zone. These were restricted to an area at the southern end of the site later determined to be within confines of the village palisade: the shape and depth of their distribution indicated that they had come from a small ossuary (Kapches 1983:4; Saunders 1985:2). Kapches (1983:3, Fig. 1) concluded that the site was a proto-Huron village of some 0.8 hectares that had been occupied ca. A.D. 1500. Coefficients of ceramic similarity seemed to indicate closest relationships were to North Shore Iroquois sites, although these measures were not particularly strong (Kapches 1983:2).

Dr. Rick Sutton, then an anthropology graduate student at McMaster University, subsequently conducted an intensive surface collection of, and tested the site in 1986 and 1987 to obtain a more representative artifact sample and to identify the nature and extent of the village's settlement patterns with the objective of elucidating the little-known 15th century settlement of the middle Trent Valley (Sutton 1986:3-4, 1987:4, 1990:9). He confirmed a double row palisade, a small section of one longhouse, various in-village features (including the ossuary mapped by Kapches) as well as several peripheral midden areas. Sutton (1990:25,27) concluded that the Bark site was a single component Huron village that dated to the mid-fifteenth century, extended over 0.7 to

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Department of Anthropology
Trent University
Peterborough, ON K9J 7B8

0.9 hectares, and was not situated for defense. On the basis of his analyses of the enhanced vessel rim and pipe bowl sherd samples, Sutton (1990: 46-50) argued that greatest similarity was with fifteenth century sites in the upper Trent Valley. He further concluded, given the seasonality of faunal and floral remains, that the village had most probably been occupied year-round by people who made use of "areas of secondary growth, wetlands, swamp and creek areas, and forest/field edges" (Sutton 1990: 25, 27).

In 1997 and 1999, Trent University undertook excavation at the Bark site in conjunction with a field school in Ontario archaeology. The site was found to be multi-component. The earliest component is late Pickering, the second reflects a prolonged fifteenth century occupation, the third is late sixteenth or early seventeenth century Huron or Algonkian, and the fourth is late nineteenth and early twentieth century European (e.g., Jamieson 1998:74, 2000b: 86-87).

In May and June of 2000, Trent University undertook its third season of field school excavation at the site. Immediate research goals were to enlarge the rather sparse artifact samples from each of the site's components and to learn more about its complex and rather atypical settlement patterns (Jamieson 2000a: 16-18,41, 2000b:85,87). Consequently, excavations were focused on a midden newly discovered in 1999 and adjacent areas known to contain settlement data. Sutton's Midden 3 (see Sutton 1990: Figs. 5 and 6 for the location of this deposit) also was sampled. The field school component of the project was designed to introduce students to the basic skills required to survey, excavate, analyze, and interpret an aboriginal site from southern Ontario.

THE 15TH CENTURY COMPONENT

Cultural remains recovered during the 2000 fieldwork are primarily from the fifteenth century component. For reasons of consistency and comparability, Sutton's (1990) analytical methodology is followed, although considerably abridged for this article.

POTTERY VESSELS

Owing to exfoliation and a large number of very small sherds, only 20 (44.4%) rims (Figure 1) are analyzable following Sutton's (1990:12) criteria. Sherd types and frequencies are: Pound Necked/Black Necked (65.2%), Lalonde High Collar (13.0%), Middleport Oblique (4.3%), and Huron Incised (4.3%). There are at least six Pound Necked/Black Necked, and two Lalonde High Collar vessels represented. There is one Middleport Oblique and Huron Incised vessel. Individual attribute frequencies for the 20 analyzable sherds, all of which are from collared and decorated rims, are presented in Table 1.

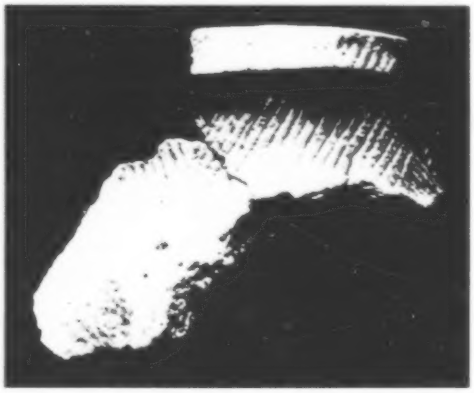

FIGURE 1. Rim and neck sherd.

Almost all of the analyzable body sherds are plain (n=159, 98.1%). Two specimens (1.2%) have ribbed paddle impressions on their exterior surfaces, and one (0.6%) is scarified. Sherd thickness range from 4 to 12 mm, with an average thickness of 7 mm. All sherds have a well-knit paste, and are composed of grit-tempered clays in which particle diameters range from 0.06 to 6.0 mm. Larger inclusions are rare.

TABLE 1. Bark site rim sherd attributes (n=20).

Attribute	%
Collared decorated	
incised	5.0
stamped	10.0
mixed	25.0
Collar motifs	
simple	40.0
opposed	10.0
horizontal	30.0
complex	20.0
Neck decoration	95.0
Secondary decoration	
interior	50.0
lip	5.0
lower punctates	5.0
sub-collar punctates	10.0
Interior profile	
convex	55.5
concave	15.0
straight	15.0
Exterior profile	
convex	10.0
concave	50.0
straight	40.0
High Collars	35.0

Temper is mainly quartzite with mica, quartz, feldspars, and granite also present. In some cases there is clear evidence for laterally oriented inclusions, suggesting manufacture by the modeling method. Sherd curvatures indicate that vessels are of globular form.

The dominant neck sherd motif is opposed oblique under a horizontal or horizontals (n=12, 29.2%). This is followed by necks having motifs consisting either of horizontal lines (n=11, 26.8%), simple obliques (n=7, 17.1%), or opposed obliques (n=7, 17.1%). Four sherds (9.8%) have obliques under horizontals. One sherd (2.3%) is plain. Obliques and horizontals are either incised/ trailed or stamped.

Of the three analyzable shoulder sherds, one is carinated in profile and lacks decoration. The other two are rounded in profile, one undecorated the other having trailed opposed obliques.

The three castellations appear to have come from different vessels. All are Simple Pointed in form and bear stamped or trailed opposed obliques in a chevron pattern. In addition, there is one strap handle sherd in the 2000 assemblage. This could reflect a Saint Lawrence Iroquoian presence at the site (Emerson 1954:83). The handle is circular in cross-section and bears two pairs of incised lines that run parallel to its length on the exterior. These are separated and laterally bounded by bands of short stamped horizontals.

POTTERY SPHEROID

This irregularly round ceramic object measures 16 by 17.5 cm in diameter. Recovered from Midden 3, it is made from a fired, well-knit grit-tempered paste.

AMORPHOUS MASSES

Two amorphous masses of tempered fired clay, one of which shows fingerprints, were recovered from a burnt area in the former floor area of House 5. A smaller but otherwise similar mass also was recovered from the former floor area of House 5. These objects, illustrated in Figure 2, are inferred to indicate pottery firing loci.

POTTERY PIPES

Sherds representing a minimum of 15 pipes were found. There are no complete or stone examples. In general the pipes appear to be well made and carefully finished. Most fragments are tempered with a fine grit (< 0.5 mm) principally consisting of particles of quartzite and feldspar.

Following Sutton (1990:15) and Emerson (1967), Trumpet and Vasiform pipe bowl types were identified. The Trumpet form has a pronounced flare at the lip and a bowl that tapers

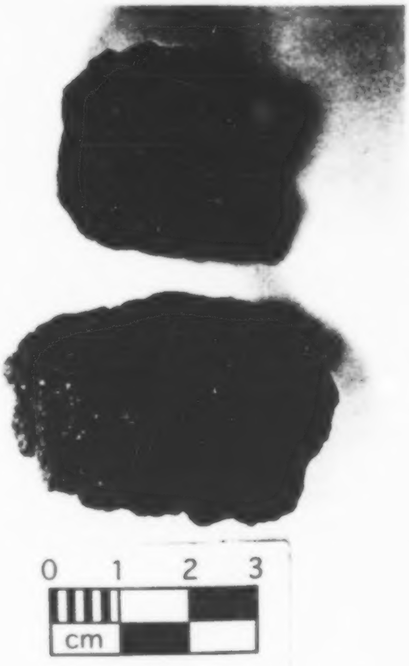

FIGURE 2. "Wasters" from pottery manufacture.

to the elbow. There are sherds from six bowls that meet these defining criteria. None is a complete bowl. Three are plain. The fourth specimen has an encircling incised horizontal immediately below the lip. Beneath this is a row of small punctates, then a band of finely-incised opposed obliques outlined by punctates. The fifth bowl has two rows of encircling horizontals below the lip with an encircling row of fine punctates under the horizontals. Beneath this is a band of incised opposed obliques. The Vasiform form is flaring at the lip, constricted below this, then expands to a bulbous base. One example of this type, a complete bowl, was found during the 2000 excavations. It is undecorated. The exterior rim has been chipped all around; presumably this was caused when the spent contents were tapped out of the bowl. The bowl is 54 mm high with an exterior lip diameter of 33 mm. The interior lip diameter is 21 millimetres.

All of the stems are plain, more or less round in cross-section, and smooth-bored. The last noted trait implies that stem bores were made into the moist clay using a small round reed or similar object rather than being formed around twisted fibre that burned out when the pipe was fired. Only one mouthpiece, a simple tapered form, was recovered. External diameters range from 21 mm near the bowl end to 11 mm at the mouthpiece.

LITHICS: DEBITAGE

This category includes all pieces of flaked stone that do not have retouch modification or evidence of use damage (n=965). Locally available toolstones constitute 49.2% of the debitage and imported Onondaga chert, 22.6% of this assemblage.

All of the cores and core fragments (n=18) are of the bipolar variety, that is, they have flakes driven from opposite ends by means of a distinctive technology in which nuclei are placed on a hard anvil and impacted with a hammer stone (e.g., Kobayashi 1975; Leaf 1979). This technology is an expedient means of producing both flake blanks and core tools.

The most common lithic material type is Upper Bobcaygeon chert, which was available in local outcrops and tills (Eley and von Bitter 1989:10; Hewitt 1972). Lower/Middle Bobcaygeon chert, which outcrops to the northwest, and can be found in tills to the southwest of the site (von Bitter and Eley 1984:135,143; Eley and von Bitter 1989:25), is the second most common toolstone type. Onondaga chert is the third most common lithic material, followed by chloride schist. Onondaga chert is exposed in western New York State and along the north shore of Lake Erie, where it was both collected from cobble beaches and quarried (Eley and von Bitter

1989:17). Pockets of a distinctive speckled, bluish-grey, fine-textured quartzite are associated, in Ontario, with Onondaga chert outcrops. Three pieces of this material were recovered during the 2000 excavations, thereby confirming that the source of the Onondaga chert was most probably the Niagara Peninsula rather than western New York. Chloride schist would have been available locally, although it may have been obtained where it is more plentiful at the southern margin of the Canadian Shield (e.g., Freeman 1979; Hewitt 1968:10; Morton 1983:26) to the north and east of the Kawartha Lakes.

The frequencies of primary versus secondary flakes indicate that Onondaga chert and Onondaga quartzite was the most intensively reduced lithic material. This pattern, in turn, suggests greater curation of these materials, consistent with greater procurement effort and/or cost. Core and shatter toolstone types further support this pattern and its interpretation.

RETOUCHED/ USED FLAKES

There are five flake tools in the 2000 lithic assemblage which exhibit discontinuous edge retouch and/or use. All but one of these is a flake of locally available chert: the exception is of Onondaga chert. These artifacts represent expedient tools that were discarded after a relatively short period of use.

CELTS

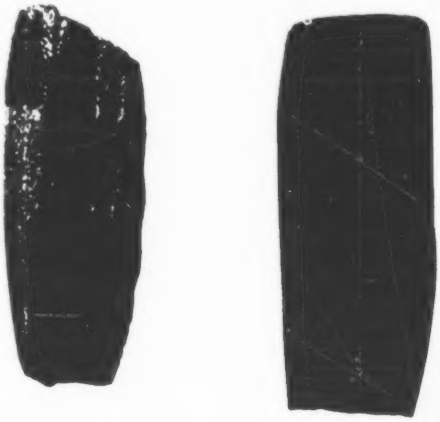

FIGURE 3. Celts.

In addition to several small chloride schist flakes that bear some evidence of grinding and polish on their surfaces, there are two relatively large celt fragments (Figure 3). Seven celts are represented in total. All presumably were shaped from tabular toolstone pieces by pecking and grinding although their polished surfaces do not bear any traces of these earlier reduction stages. Where visible, the sides are natural bedding plane breaks. One large fragment comes from a bit having an angle of 52 degrees.

MORTAR

A large flake spall from the edge of a mortar was recovered from Midden 3. The object is of gabbro and measures 155 mm in length. Its ventral face is worn flat and smooth.

HAMMER STONES

There are two hammer stones in the 2000 lithic assemblage. Both are use-modified ovate, water-worn cobbles. The first specimen is of granite with a hammering facet on one side which extends part way across one face. The facet measures 47 by 39 mm overall, but has an area of more concentrated use damage that measures 13 by 16 mm. It has a maximum dimension of 80 mm and weighs 528.9 grams. The second hammer stone is of diorite. This specimen has split crosswise and has a hammering facet 16 by 22 mm at one end. The specimen, about half of which is represented, weighs 324.1 grams. Artifacts such as these would have been used to strike flakes from bipolar cores.

FAUNAL REMAINS

Associated diagnostic artifacts and contexts confirm that the faunal sample is from the fifteenth century component or is of recent derivation. As most of this material is very fragmented, although otherwise in reasonably good condition, many of the bones have not been identified herein beyond the class level. Indeed, only 15 out of a total of 677 elements, or less approximately 2%, have been identified to the species level. These are: passenger pigeon, *Ectopistes migratorius*; moose, *Alces alces*; and white-tailed deer, *Odocoileus virginianus*. Other elements indicate that squirrels, large rodents, several canids, *Marginella*, Pelecypods (fresh water mussels), small, medium and large birds, suckers, bullheads, and an eagle also are present. These results are in accord with Sutton's (1990:19) findings.

Four unmodified pieces of antler from *Odocoileus virginianus* help us infer site seasonality. Typically, white-tailed deer develop their antlers between May and August, older bucks drop their antlers in December, and younger bucks keep theirs until February (Banfield 1974:392). Given this limited data, the maximum period of site occupation was from summer through early winter. Species noted above narrow this to a period between early summer and early fall.

Fish remains dominate the faunal assemblage with a number of individual specimens (NISP) count of 342 (57.9%). Second in terms of raw counts are mammals, at a total of 107 bones (18.1%). These are followed by 87 Pelecypod shell pieces (14.7%). As most of these remains are in a highly fragmented state, relatively few individuals actually are represented. The assemblage also contains 51 bird bones (8.6%), 1 piece of snail shell (<1%), a *Marginella* shell (<1%), and a piece of ivory or enamel (<1%).

Given that cultural remains are presumed to have been mixed to a degree by ploughing and rodent burrowing, it seems probable that some of the taxa represent recent additions. The gastropod shell fragment, for example, could have come from the shallowly-burrowing species *Anguispira alternata*, live examples of which were found on-site. Likewise, many of the small mammal remains may be those of mice who have died in their winter burrows.

With this caveat in mind, Midden 3 produced most of the site's 2000 faunal sample. The majority of the remaining faunal specimens came from pits or other such features that extended below those cultural deposits damaged by the plough although they were not necessarily immune to the vagaries of rodent burrowing.

WORKED FAUNAL REMAINS

Seven worked bone artifacts were recovered during the 2000 excavations. The first is an imported *Marginella* shell bead, ground for suspension. *Marginella* is found along the Atlantic coast, south of about 37 degrees north latitude (Ceci 1989:70). There are two tubular bone beads made of scored, snapped and polished bird long bone diaphyses. They measure between 29 and 32 mm in length and 9 to 11 mm in diameter. Also included under this category is a small tabular piece of ivory or enamel that is scored lengthwise on either face. It measures 18 by 7 by 4 millimetres. In addition, there is a 124-mm awl and a narrow spatulate tool 196 mm long (for weaving or basket/mat making?). Each is made on a splinter of large mammal diaphysis and has been smoothed and polished from use. The final artifact in this category is a toggle type worked deer phalange ground flat on posterior and anterior surfaces so that a portion of the marrow cavity is exposed. These types of artifacts are typical of St. Lawrence Iroquois assemblages (Emerson 1967:136; Jamieson 1990:394).

FLORAL REMAINS

Floral specimens, all from known or inferred fifteenth century contexts, include 25 corn kernels (*Zea mays*), a possible bedstraw/cleavers (*Galium*) seed, 2 charred round seed-like objects, 20 blackberry/raspberry/dewberry (*Rubus*) seeds, a cucurbit seed, one bean (*Phaseolus*) cotyledon, and a knotweed (*Polygonum*) seed. Corn kernel dimensions (W/T ratio of 1.5:1, L/W ratio of 1:1) and crescent shape confirm that they are Eastern Eight Row maize (Monckton 1992:30). Along with cucurbits and beans, maize formed an important part of the diet of most Late Woodland peoples living in what is now southern Ontario. These three cultigens were harvested between the end of August and late September (Heidenreich 1971:179; Fecteau 1985:32,37). *Galium* was used to make a tea drunk as an emetic or a diuretic (Monkton 1992:52). It grows in open areas and at the edges of woods and flowers from June to August (Alex and Switzer 1976:148). The starchy seeds of *Polygonum* have a long use history in Ontario, as do the leaves of its dietary greens, but its status as a possible cultigen is uncertain (Monkton 1992:46,48; Sutton 1990:25). This plant is commonly found in areas where vegetation has been disturbed and soils are damp to wet and of poor quality (Alex and Switzer 1976:39). It flowers from June through September. *Rubus* too is common in disturbed habitats along the forest edge (Monkton 1992:44). Its fleshy fruits open in July and August (Sutton 1990:25).

Wood charcoal recovered from features and post moulds remains to be identified. All floral remains are consistent with reliance on those econiches identified by Sutton (1990) and a summer through early fall occupation of the site barring storage of plant foods for winter consumption.

SETTLEMENT PATTERNS

During the 2000 season, numerous overlapped pits, hearths and post moulds - some burnt - were exposed. These had been truncated at the plough zone/subsoil interface. Portions of at least three fifteenth century longhouses were excavated.

House 1, identified by Sutton, is oriented northeast to southwest. Both House 2 and House 5 run northeast to southwest. House 2 overlies House 1. The orientations of House 2 and 5 are such that they would have overlapped: they could not have been contemporary. However, because this area of the site has been badly disturbed by deep ploughing and rodent activity, post mould patterns have been obliterated and along with them much of the evidence for the house building sequence. Hearths are centrally placed and surrounded by a plethora of ash pits and post moulds suggestive of racks. Houses 1 and 2 are ca. 7.5 m wide; the widths of Houses 4 and 5 cannot be estimated from present settlement data. The thin unnumbered midden discovered during the 1999 field season was found to overlie a mass of post moulds (several of which had been burnt), an ash deposit, and the edge of a hearth associated with House 5. This, then, suggests that the midden postdates House 5. Because this midden is located exterior to the inferred eastern end of House 2, it may have been associated with this structure; hence House 2 would postdate House 5. Several charred post moulds are inferred to indicate that a localized section of House 2 burnt; charred post remnants and an ash lens point to partial destruction of House 5 in the same manner. Three amorphous masses of tempered fired clay, one of which shows fingerprints, were recovered from two discrete large and deep burn loci on the former floor area of House 5. These are inferred to indicate areas of the site where ceramic production was carried out (Kapches 1994) after House 5 ceased to be inhabited.

THE LATE 19TH AND EARLY 20TH CENTURY COMPONENT

The single item in this category, a wire roofing nail, has a head diameter of 1 centimetre. Nails such as this are typically used to fasten asphalt roofing, which did not become commonplace until the 1920s.

CONCLUSIONS

There are at least four components to the site. The very limited settlement and artifactual data available at this time suggests that the earliest occupation was a small late Pickering hamlet which contributed to the areas of secondary growth favoured by subsequent site occupants (Jamieson 2000a: 48, 2000b: 87). As there were no associated floral or faunal materials, the economic base of this hamlet remains a matter for future research.

One structure in the fifteenth century village has been radiocarbon dated to A.D. 1420±35 (Sutton 1990:25). This heavily rebuilt site also has been estimated to date to the mid-fifteenth century based on seriation of its overall assemblage (Sutton 1990:27). The site's grouped ceramic sample was found by Sutton (1990:50) to cluster most closely with the late fifteenth century Hardrock site, "an expression of a St. Lawrence Iroquois expansion up the Trent Valley" (Ramsden 1977:70, citing Emerson 1954). However, Hardrock, along with other fifteenth and sixteenth century upper Trent Valley sites, is currently being reanalyzed and categorized as Algonkian (Lisa Rankin, personal communication 1999). Thus, the site's inhabitants may have been Algonkian or a mixture of Algonkian and Iroquoian peoples. The 2000 Bark site artifact sample contains middle Trent Valley sherds, be they Algonkian or Iroquoian or some mix of the two, and Saint Lawrence Iroquois items. The village's inhabitants were horticulturalists who supplemented their crops with collected vegetal foods and by hunting and fishing. Similar to the upper Trent Valley sites, which are now thought to represent summer aggregations rather than year-round settlements (Ramsden 1996:107), floral and faunal remains from the Bark site indicate - at the minimum - a spring through late fall occupation (Sutton 1990:25). It is a matter of conjecture that the site was occupied year-round (e.g., Sutton 1990:25).

Following scrutiny of site environs in 1999, Chief Wendell Froman concluded that the site was widely known as a place of good soil where crops could be grown in a time for famine owing to its adjacent low-lying, moist soils. Chief Froman believes that the site was used by numerous peoples as a place of temporary refuge when food resources failed elsewhere. This interpretation is consistent with Sutton's conclusion that the site was not situated for defence. It also is consistent with the extensive, prolonged rebuilding but lack of structural repair indicated by the archaeological record, the disparity between Kapches' and Sutton's estimated dates of occupation (both are likely correct), the multiple periods of use of the site locus, and summer-fall aggregations rather than year-round occupations. While there is evidence that parts of House 2 and 5 burned, there is no evidence that this was a result of intergroup hostilities and associated sparse artifact remains suggest inhabitants were able to exit the structures with their material belongings.

In 2000, a *Marginella* shell bead was excavated from Midden 3, not far from the datum stake set by Sutton. This midden contained diagnostic artifacts indicative only of a fifteenth century deposit. Ceci (1989:69) dates *Marginella* beads in Late Woodland western New York State contexts to a period after A.D. 1520. Sempowski (1989:87-89) notes that they are particularly common between A.D. 1630 and 1655. However, Jamieson (1992:72) argues that *Marginella* beads are found intermittently in Late Woodland southern Ontario contexts after about A.D. 1200.

The site's other European artifacts all date from the late nineteenth or twentieth centuries. The region was settled in the early nineteenth century by Europeans, who subsisted by intensive farming. Artifact types are consistent with European agricultural use of the site.

The results of our 2000 investigations have shown that the history of the site is complex and that considerable additional research will be required to elucidate its history. Despite assurance to the contrary, particulars of the site location were again given by the Ministry of Citizenship, Culture, and Recreation in their published list of archaeological licences approved for 2000. This level of site identification runs counter to the terms regarding a low publicity profile under which the landowner permitted fieldwork on his property; he is deeply concerned that the site will be looted. There will be no further research at the site by Trent University.

ACKNOWLEDGEMENTS

I acknowledge, with gratitude, the assistance and cooperation of Joan and Don Bark, which greatly facilitated our fieldwork and would like to thank all of the 2000 field school participants for their hard work. These included: Chief Kris Nahrgang, Erin McFaul, Emily Appleby-Barr, Mark Armstrong, Suzanne Bergeron, Kiersten Hill, John Lavery, Jennifer Nash, Jeri Maracle and Angela Waterfield. Special appreciation is extended Chief Kris Nahrgang, Chief Wendall Froman, Miss Sandra Atkins, and Mr. Curtis Lazore. The field school was funded through the Office of the Dean of Arts and Science, Trent University. Sandra Atkins catalogued the artifacts.

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THE ARCHAEOLOGICAL RESOURCE MANAGEMENT PROGRAM OF THE TORONTO AND REGION CONSERVATION AUTHORITY: 2000 FIELD SCHOOLS

ALISTAIR JOLLY AND ROBERT W. C. BURGAR

For the past 18 field seasons, the Seed-Barker site (AkGv-1) has been excavated under the direction of Robert W. C. Burgar, under the auspices of the Toronto Region Conservation Authority (TRCA) and the Royal Ontario Museum (ROM). During this time, the Seed-Barker site has functioned as a classroom for the Boyd Archaeological Field School, the York University - TRCA Archaeological Field School, the Ontario Archaeological Society Field School and the Trent University Field School. The site is a Late Iroquoian (c. AD 1530-1560) village situated on a meander spur 4.5 kilometres north of Woodbridge and 2.75 kilometres southeast of Kleinburg on Lots 16 and 17, Concession 7, City of Vaughan, York Region.

Approximately 53% (1.14 acres) of the remaining 2.15 acres of the Seed-Barker site were excavated. Elements of 20 longhouse structures and eight rows of palisade walls constitute the currently known settlement pattern of the site (Figure 1). During the past 29 field schools, approximately 900 students have successfully completed the programs and have excavated 2,616 m^2 of the site, locating a total of 918,619 artifacts. Of these, 11,816 are analyzable and have been assigned ROM accession numbers.

The excavation program conducted this past summer was a continuation of the Boyd and York University Field Schools, with the objective of continuing the excavation of Houses 18, 19 and 20. A total of 30 two metre square units were completely excavated which revealed 71 identified features, including hearths, wall trenches, storage pits and midden deposits.

Of the 36,903 artifacts recovered during the 2000 field schools, 1,898 (5.2%) are lithic. Within the lithic assemblage, 255 (13.4%) may be classified as worked tools, including 26 projectile points and fragments. While mainly Late Woodland "Madison" style points, there are single examples of Archaic Period points such as "Ace of Spades", "Crawford Knoll", and a bifurcate base variety.

The remainder of the lithic assemblage is as follows: 12 bifaces, one wedge, three drills and drill fragments, three spokeshaves, a graver, nine celt fragments, one axe fragment, one adze fragment, six complete stone beads, four stone discs, two cores, four hammerstones, three anvilstones, two grindstone fragments and one stone pipe bowl fragment. Eighty-two utilized flakes and a total of 1,643 flakes of lithic debitage were also recovered. A large sample of scrapers was also recovered, the largest number being flake scrapers, composing 77.7% of the

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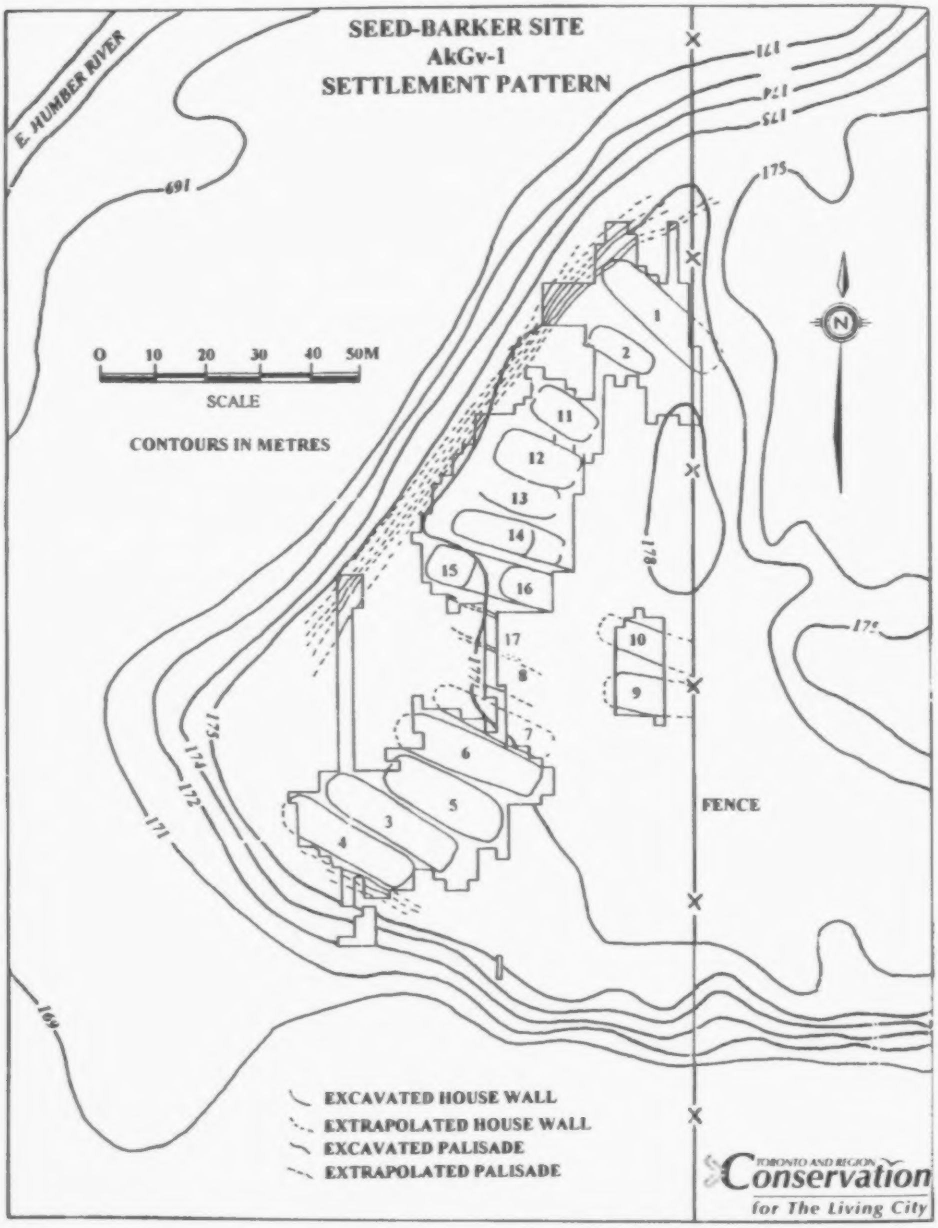
5 Shoreham Drive
Downsview ON M3N 1S4


SEED-BARKER SITE
AkGv-1
SETTLEMENT PATTERN
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TORONTO AND REGION Conservation for The Living City

FIGURE 1. The settlement patterns uncovered at the Seed-Barker site.

total recovered. Of the remainder are the following: 10 end scrapers, six side scrapers, three discoidal and two blade scrapers. Over the past 17 years, a total of 63,478 lithic artifacts have been recovered, of which nearly 4,600 specimens have been classified on the basis of morphological attributes into tool categories other than debitage.

Of the 465 rimsherds recovered during the 2000 excavations, 160 are complete and analyzable. After vessel mending, this number is reduced to a minimum of 146 vessels. Sixteen different rim types were identified, with Sidey Notched rims being the most popular, comprising 29.4% of the total sample. This is followed by Huron Incised rims which comprise 21.9% of the sample and Seed Incised rounds out the top three types with 10.6% of the sample.

Eighty-one ceramic pipe fragments were recovered. From this number, 15 are identifiable fragments of bowls and three are complete. Eleven mouthpieces were found, of which all of the stems lack decoration. The remaining pieces are miscellaneous fragments.

Finally, 16,427 faunal specimens were recovered, of which 152 are worked. This results in a total of 555 pieces of artifactual material that was assigned accession numbers. Ceramic bodysherds, unworked faunal, unworked floral and unworked lithic material were counted and stored.

Aside from Seed-Barker's inherent archaeological value, the manner in which the site has been investigated over the past 18 years provides a unique opportunity for innovative and thorough research. It is one of the very few sites which has been recently excavated entirely by hand. The goals of the educational programs are to instruct students in proper excavation techniques with education and quality of information being the primary concerns, not volume of information.

The latest York University - TRCA and Boyd Archaeological Field Schools were extremely successful and during these excavations (Figure 2), the 59 students who participated in the programme were introduced to excavation and laboratory techniques, and they responded with enthusiasm to all the new challenges presented to them.

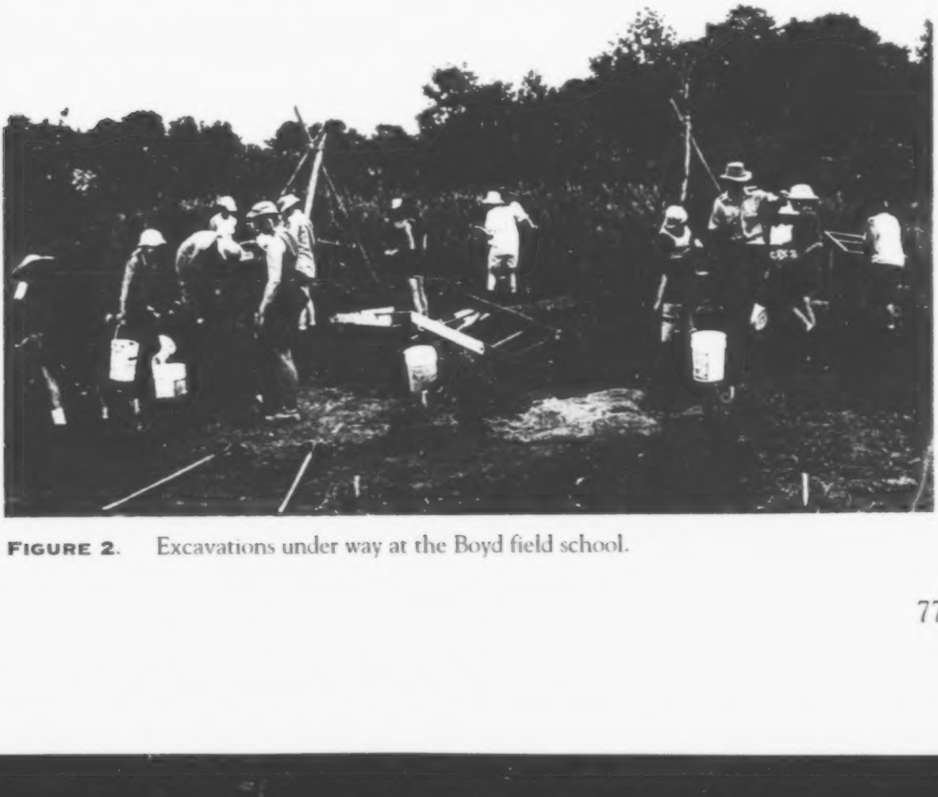

FIGURE 2. Excavations under way at the Boyd field school.

THREE YEARS AT THE BAY: 2000 EXCAVATIONS AT THE ASHBRIDGE ESTATE, AJGT-1

MARTHA LATTA

During May and June in 2000, 27 undergraduate students participated in the third annual six-week archaeological field school held through a partnership between the University of Toronto and the Ontario Heritage Foundation. During the period 1998-2000, 79 undergraduate and 7 graduate students have been privileged to study archaeological contexts and artifacts at the Ashbridge Site, AjGt-1.

Over the past three years, we have explored several areas of the site which were associated with the Jonathan Ashbridge family who immigrated to Upper Canada in 1793. These include the original log cabin (attested by family tradition but otherwise completely demolished), a frame house built in 1809 whose foundations remain fairly intact, a cold cellar adjacent to both structures, one or more outbuildings, two wells and a privy.

The primary study area is shown in a sketch by Wellington Ashbridge (see Figure 1) which dates from the late 19th century. The drawing looks east from the extant 1854 house (now 1444 Queen Street East). The 1809 frame house is depicted on the right; the yard and outbuildings are on the left (to the north). Queen Street lies just off the right margin of the drawing.

1794 LOG CABIN

Excavation of the cabin area was completed in 2000. Several cedar logs and planks were recovered in 1999 and 2000. These logs were oriented parallel to the north side of the 1809 foundations and spaced almost exactly 6 metres (19.5 feet) apart. The east-west dimension of the cabin is less clear; it is probably around 4 metres (13.5 feet).

Ashbridge's sketch (Figure 1) does not show a log cabin, but it does show an attached work area or shed immediately north of the frame house in the place where Wellington Ashbridge locates the cabin. It is possible that this shed was the original cabin covered with shingles or stucco, a common practice in 19th century Toronto.

A formation of dressed field stones which was discovered in 1998 was initially believed to be a foundation, but subsequent investigation showed that this feature consisted of a single straight row, about 2 meters in length and 0.5 meters in width, coincident with the presumed north wall of the cabin. Perhaps this was part of a hearth or stove: the Ashbridge sketch shows a chimney on the north wall of the attached shed.

Deposits of wall plaster bearing traces of red, green and white paint indicate that the cabin's interior was finished, at least in its later stages.

University of Toronto at Scarborough
Department of Anthropology
1265 Military Trail
Scarborough ON, M1C 1A4

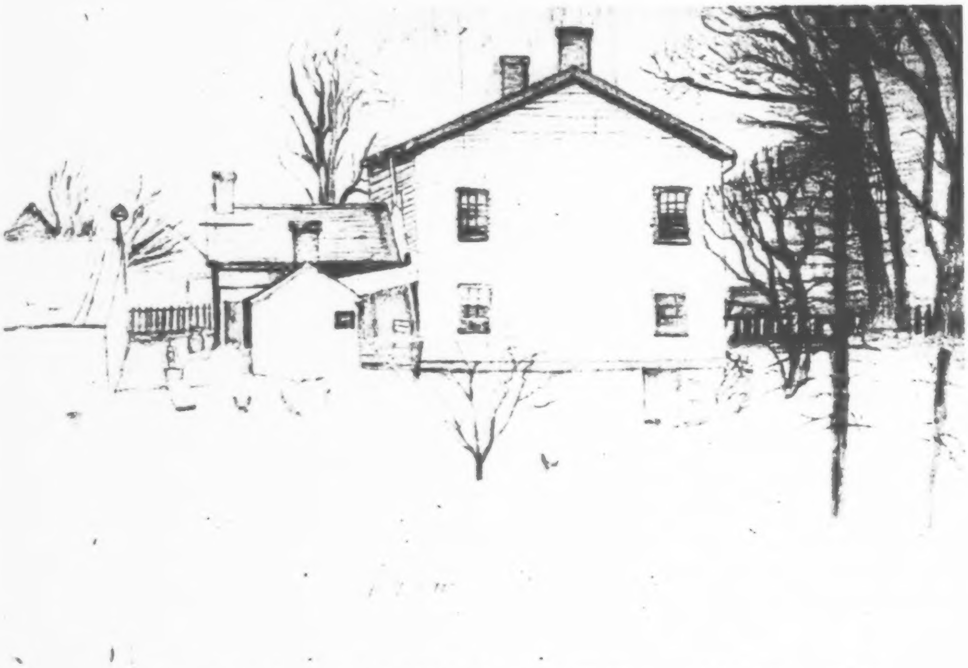

FIGURE 1. Pencil sketch of 1809 Ashbridge home by Wellington Ashbridge ca. 1906.

1809 FRAME HOUSE

The stone foundation of the 1809 house survives as an outline for a rose garden. We tested the exterior of all four sides in order to ascertain the construction sequence of the frame structure and to evaluate the extent of alteration to the foundation during its conversion to a rose garden. We identified and examined an entrance to the frame house's cellar, probably used for coal, ice, potatoes and similar bulk deliveries. This door appears on the facing (west) side of the frame house in Figure 1.

Due to the rose garden inside the foundation, excavation inside the 1809 house was limited to a test pit (dug in 1999). This pit showed that the cellar of the 1809 house contained late 19th century objects.

COLD CELLAR

At some point, a cold cellar was constructed on the east side of the log cabin. This cellar had first been noted during the 1988 test excavations by the Archaeological Resource Centre. Our excavations showed the cellar pit to be nearly two metres in depth and completely filled with layers of debris including large amounts of brick rubble. At the bottom, we found traces of a packed clay floor covered with wood planks in some places, and a well designated Well 1.

When completed, the cellar covered an area of about 13 square meters, measuring approximately 3.3 m north-south by 4 m east-west. Its floor was approximately 3.75 m below the present surface. Uncertainty derives from the fact that the cellar walls were sloped in places and had doubtless crumbled during the original fill process. This depth also includes a surface accumulation of 20-30 cm from modern landscaping and sodding.

We have treated the cold cellar as a separate structure from the log cabin rather than as a cellar underlying the cabin. Despite careful searching, however, we did not find any trace of an entrance ramp leading from the surface to the cellar floor. Such a ramp would have extended well outside the cellar and it should have been clearly visible in the stratigraphy adjacent to the cellar; the entrance to the coal cellar in the 1809 house shows a prominent ramp. The absence of an entrance ramp suggests an internal entrance to the cellar, perhaps through a trap door or ladder, and this implies an overlying structure.

WELL 1

This first well measured 1.0 m in diameter and was lined with brick. The surviving top of Well 1 lay at approximately 170 cm below ground surface, roughly flush with the floor of the cold cellar. Its top was disturbed to an unknown extent, with bricks displaced and scattered around the cellar floor. The well shaft was filled with broken wood and brick rubble mixed with soil and artifacts. It was excavated to a further depth of more than 180 cm (i.e. 370 cm below surface), at which point water seepage made further investigation unsafe.

Artifacts mixed with the well fill are identical in date and style to those of the fill in the lower parts of the cold cellar; presumably both structures were decommissioned at the same time. Ceramic styles are generally consistent with a date in the 1830-1840 range, suggesting that the cellar and well were abandoned around the middle of the century. There is no recognizable cold cellar in Figure 1, but from this perspective it would have been hidden by the shed attached to the 1809 frame house.

WELL 2

The second well was situated at the western edge of the 1999 excavation. It measured 1.1 m in diameter and 8.5 m in depth. Essentially complete and functional, Well 2 contained 4.8 m of water at the bottom. No attempt was made to excavate this well.

Artifacts from Well 2 date from the late 19th or early 20th century. The existence of this well was unknown to the Ontario Heritage Foundation and therefore unexpected in the excavation. It appears in the foreground of Ashbridge's sketch as a pump located beside a boardwalk leading from the complex of structures at the right to the large shed or barn at the left.

OUTBUILDINGS

Figure 1 shows several extensions and outbuildings in the back yard of the frame house (at the northwest end of the archaeological site). As noted above, one of these structures may have been the original log cabin altered for use as a wash or cook house. Other outbuildings and a porch are represented archaeologically by square post-moulds, often with wood posts surviving within the feature. In the porch area, we found an overturned sewing basket — a thimble, a crochet hook plus a bone handle from a second hook, and twenty straight pins, together with half of a lady's spectacles.

PRIVY AREA

A slight surface depression located about 10 m north of the porch proved to be a late-19th to 20th century privy pit and refuse dump. The pit contained abundant fragments of ferrous metal cans of various sizes and fragments of iron machinery. These materials, especially the cans, were virtually absent from the rest of the site, which suggests that the privy may have been associated with the latest period of site residence.

At the bottom of the privy pit, the students discovered two stoneware jugs. One jug (Figure 2) is identified as the product of Samuel Skinner's pottery in Picton, Prince Edward County, Ontario; he operated between

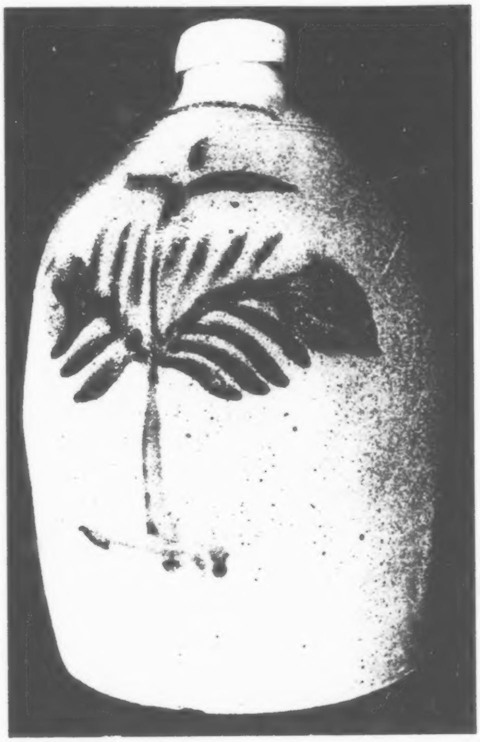

FIGURE 2. Stoneware jug from privy

1854-1865. This particular design is designated "Bird and Flower". The excavators noted that the jug was surrounded by a mass of raspberry seeds. A second jug, which remains unexcavated, is conspicuously labelled 'Wines and Spirits'. The Ashbridge family were staunch Methodists, so we attribute these jugs to clandestine consumption by servants and/or farm hands.

ARTIFACT ASSEMBLAGE

The 2000 season produced 24,147 objects, including a large quantity of fragmented metal, which brings our total assemblage for the site to just over 79,000 artifacts. These include more than 15,000 refined earthenware and porcelain tableware sherds representing some 260 distinct patterns, 385 pipe and tobacco products fragments, 144 fragments of children's toys, 411 buttons, and the usual large numbers of fragments of glass bottles, window panes, coarse earthenwares and nails.

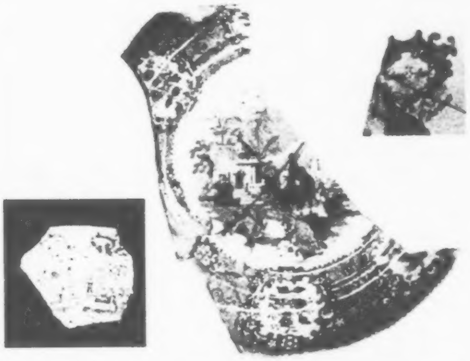

FIGURE 3. Blue transfer print 'Oriental' pattern ca. 1830 – 1844.

Figure 3 shows the most common pattern of blue transfer: 'Oriental', made by William Ridgway of Hanley during the period 1830-1844. Altogether, 172 sherds have been identified to this pattern, representing an extensive table service with plates, cups, saucers, bowls and serving pieces.

About 3000 faunal bones have been recovered, many of which are presently under analysis. Domestic mammals were well represented, but chickens are relatively scarce. Despite the proximity of Lake Ontario's Ashbridge Bay, fish and wild fowl remains are virtually absent.

DATES

Twenty-four coins range in date from a U.S.A. 1810 Liberty Head One Cent coin, a British 'Waterloo' halfpenny (1816), and a 'Spread Eagle' half-penny token of about the same date, to a 1996 Canadian 10 cent coin. Upper Canada suffered, in the early decades, from a shortage of coinage. Foreign coins were widely used and counterfeiting was rampant. Two Irish coins (a 'Bust & Harp' token dated 1820 and a George III token of about 1812) were probably passed as English coins. Irish currency was greatly devalued in Britain but could be passed at face value in the colonies (Charlton 1978:169). A 'Bouquet Sou' is definitely a counterfeit of the 1837 Bank of Montreal token.

Approximately half of the table ceramics in the main portion of the site (omitting the uppermost layer of modern landscaping) are pearlwares. The remaining sherds divide evenly between creamwares and whitewares. Porcelain is relatively uncommon. Ironstone, coarse whiteware and buffware occur in small numbers, as do isolated sherds of black (basalt) and refined redware.

These materials date to the early decades of the 19th century but we have found no definitive evidence of 18th century occupation. Apparently the Ashbridge family brought few possessions from their former home in the United States, preferring to buy new goods in Canada. The family prospered in their new home, as indicated by the abundance of goods from the early 19th century. Jonathan Ashbridge's increasing affluence is indicated by his construction of the 1809 frame house and his subsequent marriage.

ABORIGINAL ARTIFACTS

The 2000 season raised the total of aboriginal artifacts to 137. These include 68 ceramic sherds, four chipped projectile points, seven bifacial scrapers, one ceramic pipe and one toy pot. Many vessel fragments show cord or dentate decorations typical of the Pickering Tradition, (Early Iroquois, ca. 1200-1400 AD) but some of the lithics are probably considerably older. The most challenging find (in 1998) was a ground stone double-bladed 'propeller' (see Figure 4); no similar object has yet been discovered in Ontario or the United States.

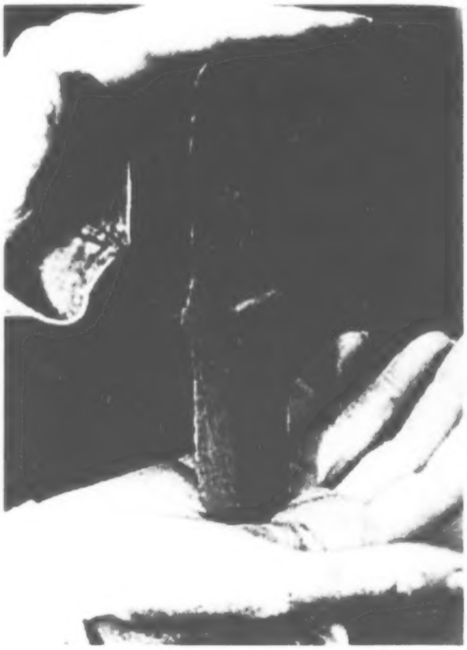

FIGURE 4. Groundstone "propeller."

CONCLUSION

The students and faculty of the University of Toronto wish to express thanks to the Ontario Heritage Foundation, and to Dena Doroszenko in particular, for this opportunity to learn about Ontario's history.

SITE/PROJECT SPECIFIC ACTIVITIES:

ARCHAEOLOGICAL SURVEY CONDUCTED AT PETRIE ISLANDS BJFU-3

JEAN-FRANCOIS BEAULIEU

INTRODUCTION

During the summer and fall of 2000, the author visited and surface inspected the Petrie Islands in search of interesting archaeological sites. The 220-acre area consists of a series of three islands (also called Leonard Group Islands in deeds) located on the Ottawa River at the north end of Trim Road and within the City limits of Cumberland. The area has a main access road and parking facilities. Several parts of the Islands were explored: the beach and the waterfront of West island, parts of the East island nature trail and the Rivington wharf embankment area. No archaeological surveys of these islands has been done in the past to the author's knowledge. The goals of the survey were to find evidence of prehistoric sites and to confirm evidence of historic occupation. The methodology consisted of surface inspection and collection. Some measurements of features were also taken. The Islands have always been, and still are, a well-known fishing spot. The Carillon Dam, and the presence of the sand quarry, somewhat modified the islands.

On August 19, 2000, a small team of the Ontario Archaeological Society's Ottawa Chapter members assisted in an archaeological survey of the Islands. No confirmation of prehistoric occupation was found, however, the islands do contain several 20th century sites.

HISTORICAL BACKGROUND

The Islands were named after Archibald Petrie, municipal councillor and Cumberland Township reeve in the 1850s-1860s. His son, Edward Petrie, a real-estate agent and also a Cumberland Township reeve, in the 1890s and the 1900s, later owned the Islands. The Petrie family was known to own the islands from the 1830s to the early 1900s. In 1913, the islands were reclaimed by the Crown and patented to Henry Deschambault (owner of the City Hotel of Ottawa), from 1913 to 1915. A clause of the deed stipulated that the Crown had the authority to cut pine trees on the Islands and this may explain the lack of such trees on the Islands today. Another clause mentioned a right-of-way leading to the shores of the river and stream for all kinds of ships, suggesting the presence of a wharf.

The other owners were mostly entrepreneurs and farmers: The Ottawa Wine Vault Co. (wine, alcohol and cigar store) from 1915 to 1917, Oscar Gauthier owned the property in 1917, Moise Galipeau (a coal and wood dealer of Ottawa) from 1917 to 1923, Joseph Guérin (Gloucester Township farmer) from 1923 to

1375 Kinsella Drive
Cumberland, ON K4C 1A9

1928, Albert Major (Cumberland Township farmer) in 1928, Les Frères des Écoles Chrétiennes d'Ottawa from 1928 to 1942, Mazenoide Parizien (Cumberland Township farmer and wood dealer) from 1942 to 1955.

Buildings are mentioned in a mortgage deed between Parizien and a Mr. Joseph Montpetit dated January 1942. From 1943 to 1948, the Islands were leased for hunting and trapping by a party with Mr. Joseph Montpetit. Camps are mentioned in the deed. Another clause also mentions that he (Parizien) will restrict himself from the felling of timber, log and firewood operations. From 1955 to 1983, Donat Grandmaitre Ltd. (garage owner and coal dealer of Eastview) owned the islands. Since the late 1950s, the Grandmaitre family has been operating first, a sand dredging operation, and later, a sand quarry on the islands. In 1956, a bridge was built allowing easy access to the Islands. In 1964, Donat Grandmaitre Ltd., subdivided parts of the islands for cottage lots. Most of the lots were sold to Grandmaitre family and employees. There were once five cottages on the beach waterfront, three are still present on the island. Two are presently privately owned and a third one is currently used by the Friends of Petrie Islands (FOPI), a group formed in 1998 to protect the islands' ecological environment. Since the 1970s, there were several environmental and ecological studies that recognized a special status to the Islands. In 1983, the Islands were acquired by the RMOC which still owns them.

THE WATERFRONT AND BEACH AREA

The surface inspection of the beach waterfront area of the West Island revealed the presence of a wharf foundation wall still remaining. This is the area where the Friends of Petrie Island maintain a picnic area. Six woodcut piles were seen aligned amongst the foundation wall remains, composed of huge cut stone slabs. This confirmed the presence of an early 20th century wharf built on piles. A clay embankment is located parallel to the beach. A rectangular shaped foundation structure composed of collapsed, dressed stone walls, possibly a warehouse, was observed in a nearby forest close to the wharf remains. The beach area shows 17 architectural features (square beams, foundation walls, tie rods, concrete blocks, steam or water pipes and a machinery part) which were observed in situ. A concrete block found in the rubble shows the inscription "8/23" (perhaps August 1923?). The waterfront area revealed the presence of 25 artifacts of the 20th century which were collected. A 1977 aerial photo of the Islands shows a series of four rectangular-shaped features, possibly of wharf embankments on the beachfront. A 1987 map still shows three cottages on the waterfront.

EAST ISLAND NATURE TRAIL AREA

The surface inspection of the southern part of the Nature trail located at 381 yards west from the parking lot on East Island revealed the presence of 16 artifacts of the 20th century which were collected. Seven features (a metal post, slag or coal assemblages, a squared log with hardware on the shore, a logging trail, cut pine stump, miscellaneous bottles) were observed. In 1956, a steel bridge with wooden foundations was built in the area, presumably near the current bridge, linking the mainland to the Islands. This is an isolated area, although a 1977 aerial photo of the Islands does show a road or a trail. The area shows many clearings which could be due to clear cutting. The northern part of the trail on East Island has revealed an assemblage of concrete slabs with tie rods near a pond. Some of the observed artifacts date back to the 1920s, others are more recent.

A 1918 RIVINGTON WHARF EMBANKMENT

The 1918 Rivington wharf embankment area, located in the Sand Bar Bay area, revealed the presence of a clay embankment when surface inspected. This feature measured roughly 480 yards by 1 meter high. Eight other features were observed: five squared logs (some with hardware), one round post (with hardware), a rotten wood post or tree stump feature and one squared log on the shore. A wire nail artifact was collected. The observed logs could be either part of the 1918 wharf, part of logging booms or part of the 1956 bridge. A series of four wharves called Rivington wharves are shown on a 1918 map of Cumberland Township. The Rivingtons were said to be quarrying sand.

SUMMARY AND CONCLUSION

The surface inspections done on Petrie Islands during the summer and fall have revealed a series of 20th century occupations. One of our goals, of finding prehistoric evidence, has not been achieved. The Islands were first owned by the Petrie family in the 1820s to the 1900s. Nine subsequent owners, mostly entrepreneurs and farmers, had the Islands into the 20th century. Their activities were related to commercial navigation e.g., wharves, logging, sand quarrying and later, leisure e.g., hunting, trapping, fishing, and cottages. The wharves were probably used for the logging drive, to ship sand, and bring hunters and fishermen. The Islands seem to have been used for clear cut pine logging as well. A series of commercial buildings, e.g., a warehouse or perhaps camps, were probably present on the beach area.

The presence of wharves on Petrie Islands reinforces the importance of commercial navigation on the Ottawa River in the late 19th and early 20th century. Commercial navigation ended in 1925 on the Ottawa River. Before the 1956 bridge, the wharves were probably the only access to the Islands. The beach area had an early 20th century wharf, on piles, followed by a series of buildings in the 1940s and cottages in the mid-1960s. The East Island had some kind of activity related to logging and hunting between the 1920s and the 1940s. from the late 1950s to the 1970s, according to FOPI staff, the island was used as a dump by the City of Vanier (Eastwood) until 1969. The remains of a Rivington wharf embankment was also confirmed. Generally, the Islands have been regularly visited since circa 1913 until today where the islands are still a popular leisure place for picnics and fishing.

During the surface inspection, 42 modern artifacts were collected. A total of 34 features were observed. Because of the potential new bridge project between the provinces of Ontario and Quebec, and the FOPI Beach Expansion Project, it is felt that further archaeological assessment should be made without delay. The 1977 Class M1 Wetland classification given by the Ministry of the Environment confirms the importance of flora and fauna of the islands.

ACKNOWLEDGMENTS

I would like to thank the small OAS Ottawa Chapter team composed of Jean-Luc Pilon and Jim Montgomery who spent a whole day with me doing fieldwork on the islands.

MEMORIAL PARK ON THE COMMONS: ARCHAEOLOGY AT THE MILITARY RESERVE, FORT GEORGE NATIONAL HISTORIC SITE, NIAGARA-ON-THE-LAKE

RACHEL BROOKS AND JOSEPH LAST

INTRODUCTION

For nine days in early May of 2000, a three-person fieldcrew tested the proposed corridor for a parking lot extension at the Commons on the Military Reserve in Niagara-on-the-Lake. Originally, the town had developed several plans to address the limited parking for Memorial Park. Since portions of the park are on lands leased from Parks Canada, the proposal required review for potential threats to historic resources. In this instance, the town's preferred option was to lease additional land adjacent to the park and immediately northeast of the Commissariat Officer's Quarters. The quarters are part of Butler's Barracks, once a major military depot and logistical centre for Camp Niagara. Butler's Barracks, the Commons, and Camp Niagara are all contiguous areas that make up the Military Reserve. Together, they have seen over 150 years of continuous military use. Subsequently, any development near or on the Reserve has the potential for recovering evidence of activities relating to the War of 1812, the Rebellion period, or military training associated with both World Wars.

The study area measured 12 metres east-west by 108 metres north-south and lay along the west side of Centre Street which acts as the western boundary for Memorial Park (Figure 1). While Ontario Service Centre (OSC) archaeologists have investigated portions of the Commons and Butler's Barracks, the proposed parking area had never received testing. As part of the leasing agreement with the town of Niagara-on-the-Lake, field-testing would precede construction. Depending on the results of the survey, the site manager of Fort George National Historic Sites (NHS), in conjunction with the town and OSC Archaeological Services, would develop further mitigative strategies and design modifications for the parking facility.

DEVELOPMENT OF THE MILITARY RESERVE AT NIAGARA

When the British reoccupied Fort George in December 1813, they founded a new supply base on Ordnance lands farther to the west and out of reach of the guns of Fort Niagara. Collectively known as the Military Reserve, the area consisted of the Commons, Butler's Barracks and later, Camp Niagara (Figure 2). Between 1814 and 1815, the army initiated a building programme that saw the construction of a gun shed, two-storey barracks, storehouses, and service buildings. By 1854, Butler's Barracks contained twenty-three structures enclosed within a palisade. (Carter-Edwards 1985). In size, it encompassed an area of eight hectares.

Parks Canada Agency
Ontario Service Centre
111 Water St. E.,
Cornwall, ON K6H 6S3

FIGURE 1. Overview of study area facing north. Centre Street and a portion of Memorial Park can be seen in upper right hand corner of photograph. Photo by J. Last. Parks Canada, Ontario Service Centre (Cornwall). Photo no. 19H-42W.

As the headquarters for the Commissariat Department, it was a major dispatch centre for the Niagara Peninsula. The British army occupied Butler's Barracks until 1857 when the last of British Regulars were withdrawn. In 1871, the Board of Ordnance transferred the land to the Dominion of Canada. From that time, the military used Camp Niagara as a summer training facility for both regular and militia regiments (Figure 3).

During the First World War, some 18,000 men of the Canadian Expeditionary Force trained and lived under canvass at Camp Niagara. The site developed further in the 1940s when it again prepared troops for the Second World War. The infrastructure of the camp grew to include parade squares, tree-lined avenues, and rows of ablution rooms, kitchens, and privies. It remained in military use until 1964, when it officially closed. Five years later, the Department of National Defence transferred the Reserve to Parks Canada.

SURVEY STRATEGY

The Town of Niagara-on-the-Lake's proposal required lowering the elevation of the existing grade along the eastern edge of the study area. This necessitated testing to inventory and evaluate resources and to obtain a better understanding of the depth at which historic deposits occurred. The investigation employed both interval and biased sampling. Interval sampling consisted of two parallel intersects, spaced four meters apart, running north-south through the study area. Test units measured 50 cm square, placed at 10 m intervals. To ensure that cultural layers were recorded, the units were hand-excavated to natural 'C' Horizon clays using

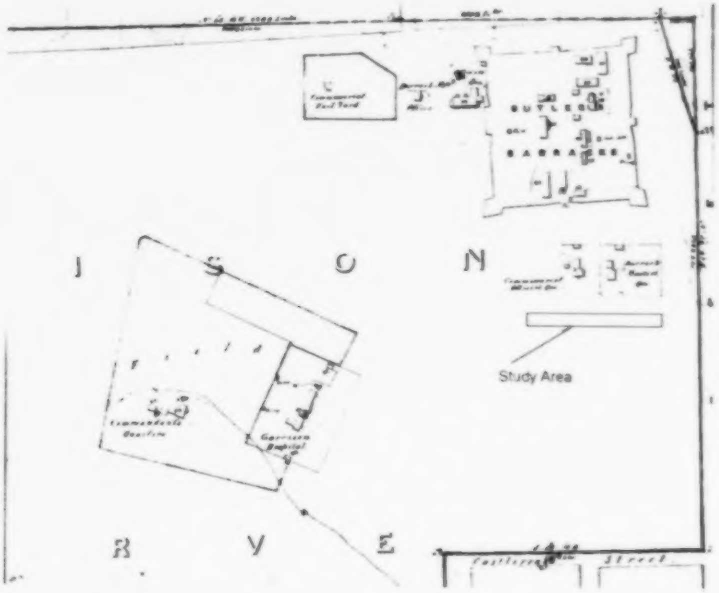

FIGURE 2. Detail of Butler's Barracks, Hospital and Commandant's Quarters Verification, ca. 1852/53. Note study area adjacent to Commissariat Officer's Quarters. National Archives of Canada: Cartographic and Architectural Division, NMC K1(R)/440.

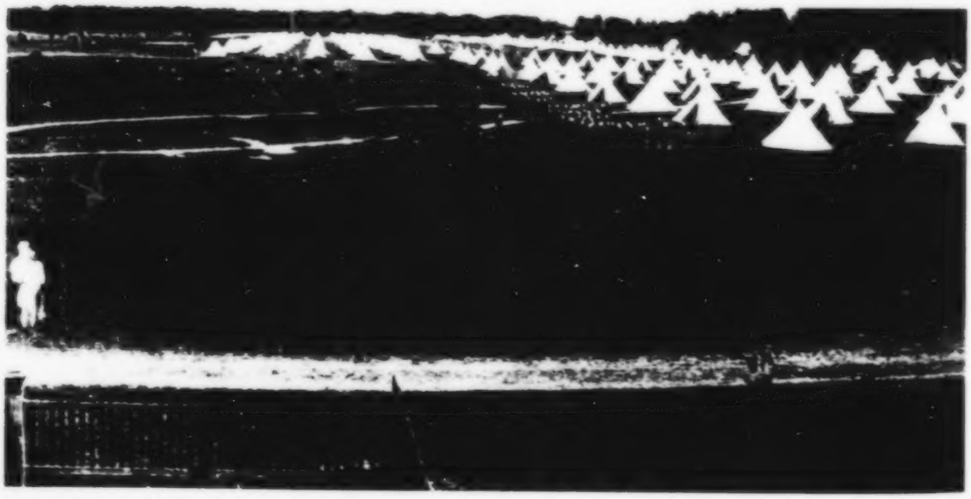

FIGURE 3. Niagara Camp, 1892. View from the Headquarters of Lt. Col. William D. Otter. National Archives of Canada. Negative no. c-31383.

stratigraphic rather than arbitrary layers. Biased sampling was used along the western transect in order to excavate unique and interesting features. A combination of the two sampling methods provided a reasonable coverage within the study area.

Following the first mitigation strategy, two machine-cut trenches were opened. One examined the nature and construction of a service road found during the initial survey. Oriented north-south, the trench ran for eight metres. The other trench explored the southern portion of the study area. Its length was approximately two meters. Both measured 1.0 m in width.

The third and final mitigation technique involved a metal detector survey. The methodology was quite simple. Beginning in the north end of the study area, each 'hit' was flagged, excavated to determine stratigraphic context, and plotted. Although we inventoried every artifact, only pre-1960 items were kept. Upon sweeping the metal detector in the vicinity of the historic road, a constant positive reading occurred. When excavated, we found the buried road surface to contain metal-bearing slag. Thus, the metal detector not only recovered a variety of objects, but also contributed additional information concerning road construction and its route.

PHASING AND ANALYSIS

The excavation of 15 test units revealed similar stratigraphic sequences representing three temporal phases. The earliest consists of natural soils; the second phase constitutes military occupation (1814 – 1964), while the third encompasses post Camp Niagara occupation.

PHASE I: NATURAL SOILS

Phase I contains the earliest deposits within the study area. The 'B' Horizon consists of a mottled, silty loam averaging 10-12 cm in thickness. Water-worn pebbles and naturally occurring charcoal fragments lie beneath the 'B' Horizon and help to demarcate the upper elevation of the 'C' Horizon. An additional 'C' Horizon strata existed wherever excavation exceeded 1.0 m in depth. Unlike the upper deposit, which is characteristically yellow in colour, the lower deposit has a reddish hue.

PHASE II: MILITARY OCCUPATION

Phase II represents military occupation on the Commons dating between 1814 and 1964. Soils within this phase consist of mottled, silty clays of medium compaction. Similar to the 'B' and 'C' Horizons, there is considerable worm activity, as well as soil leaching. On average, the deposit averages 7 cm in thickness.

Testing recovered only a few historic artifacts (43) dating to this phase. This is surprising considering the longevity of occupation on the Commons. Soil profiles throughout the study area displayed a uniform stratigraphic sequence, which does not appear to have been reduced by scraping or scouring. The absence of artifacts, therefore, is not due to any post-depositional removal of soil. It is possible that the army cordoned off the area to limit access. Unfortunately, the survey found no post moulds to substantiate this. However, the military took extreme precautions when dealing with sanitation, placing the responsibility directly with the medical officer. The militia removed garbage and horse droppings daily. Recycling was also important during both World Wars. In addition, personnel reused or recycled premium items, such as cartons, burlap bags, boxes, and baskets (Hawkins, Mayer and Richard-Onn 1991). The production of minimal amounts of garbage, the reuse of objects, and the attention to sanitary concerns may explain the lack of artifacts recovered in this survey.

Regardless, our investigations unearthed a range of ceramics, beverage containers, and construction-related items pertaining to the period of military occupation. While most date to the First and Second War training periods, few are associated with the initial development of the Reserve. One was an early wine bottle finish. Typical of bottles of the 18th and early 19th century, it had a string rim, champagne, flat-topped finish (Jones et al.1985). Investigations also recovered a heavily corroded knife blade. The blade has a 'rat-tail' type tang, tapering from the bolster to the end. Its shape has two diagnostic features: the choil and the 'humpbacked profile'. Choils came into manufacture around 1760 and the characteristic 'humpback' style was no longer popular by the early 1820s (Dunning 2000). Another item found was a copper-alloy disc. It proved to be a Tiffin token. Produced by Joseph Tiffin between 1832 and 1836 (Cross 1990:129), the token resembled an English 1812 halfpenny.

FEATURES

Upon arrival at the site, we undertook a visual inspection of the study area. Although masked by a mantle of sod, a linear, cambered-feature remained visible. It turned out to be a roadway. The thoroughfare ran east-west across the study area and was approximately 4.95 m wide. Shallow ditches defined both edges of the feature (Figure 4). Varying in width from 1.0 to 1.25 m, their depth ranged from 35 to 45 cm below historic grade. Excavation revealed a wheel rut, capped by a layer of slag, and deeply imbedded into the road's underlying strata. This suggests that the military employed the road for a time before it received surfacing material. Similar to other roads investigated at Camp Niagara (Last 1998), little, if any, preparation went into its design or construction. Narrow cuts, running parallel to the road, formed the ditches, while the original road surface consisted of nothing more than trampled and compressed sod.

Typically, the army surfaced the roads at Camp Niagara with chip-seal asphalt during World War II. This route, however, received nothing more than a thin veneer of clinker, ash, and stone. The surfacing material lay upon, but did not penetrate into, the underlying strata. This suggests that the road saw limited use by heavy vehicular traffic. Artifacts recovered from the roadbed could not definitively date the trail. It first shows up on a 1923 plan of the Reserve and for the next eight years functioned as a service road linking Butler's Barracks to an oval race track to the east.

PHASE III: POST CAMP NIAGARA

This phase represents recent depositional activities that includes the latest 'A' Horizon and a fill layer. Dating to the 1960s, the sod has evolved since the demise of Camp Niagara. Uniform in colour and content, it varies in thickness from 9-11 centimetres. In the southern most portion of the study area, a recent layer of clay overlies the present sod. The Town of Niagara-on-the-Lake used this area of the site to stockpile material during the construction of the soccer pitches at Memorial Park. Artifacts from this phase represent leisure-based activities. The assemblage contains beverage bottles, plastic wrap, and glass containers; constituting just over 75 percent of the artifact sherd count.

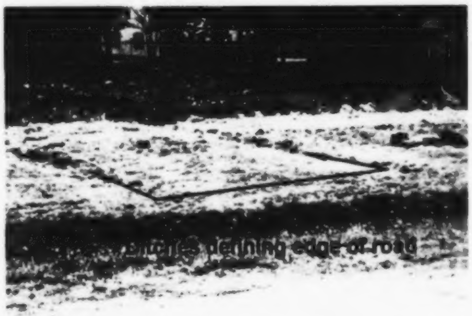

FIGURE 4. View of roadway after grass cutting. Ditches clearly demarcate the limits of the thoroughfare. Photo by J. Last. Parks Canada, Ontario Service Centre (Cornwall). Photo no. 19H-44W.

CONCLUSIONS

Parks Canada, OSC Archaeological Services, undertook investigations on the Commons in order to mitigate impacts resulting from the addition of a new parking lot for Memorial Park. As part of the Commons at Fort George, the study area has a history of military occupation spanning more than 150 years. During the Camp Niagara period, thousands of troops trained and camped on the Commons. Excavation revealed a thin sheet scatter of construction-based objects directly relating to this 1814-1964 phase. One road, simply constructed and rarely used by heavy vehicular traffic, also dates to this period. The majority of the artifacts recovered are associated with the post-Camp Niagara phase of occupation and relate to leisure-oriented activities consistent with a park setting. Again, artifact numbers were slight indicating limited use or a conscientious programme of waste removal. Knowing that the area possesses a uniform stratigraphic sequence throughout and is uncommonly devoid of artifacts, no additional testing was required.

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ONTARIO HERITAGE FOUNDATION: 2000 FIELDWORK

DENA DOROSZENKO

The Ontario Heritage Foundation (OHF) is a not-for-profit agency of the Government of Ontario whose mandate is to protect, promote and preserve the architectural, archaeological, cultural and natural heritage of the province for present and future generations. In the course of acting as a provincial trust, the OHF has acquired a vast quantity of acreage deemed provincially significant because of it natural heritage/environment. To date, the OHF holds 153 properties. These include 22 built heritage properties, ten of which are National Historic Sites, 39 natural heritage properties and 92 Bruce Trail properties across the province.

Homewood is located on the north side of Highway 2, approximately 8 kilometres east of the City of Brockville, Ontario and just outside the village of Maitland in the County of Leeds-Grenville.

HISTORICAL BACKGROUND

Dr. Solomon Jones of Homewood came to Canada as a United Empire Loyalist. He and his three brothers formed a family that was very influential in shaping the later development of Upper Canada. In 1799, Jones commissioned Louis Brière, a Montreal mason and contractor to build a "gentleman's residence" in stone. In the finished house, the Late Georgian design tradition is immediately apparent in many details, especially the shutters and metalwork, which show French Canadian influence. Six generations of the Jones family lived at Homewood until 1972. The west wing was added in the mid-20th century carefully constructed to match the original home. This National Historic site was restored in 1979 and opened as a museum illustrating several periods in the Jones' family history.

Solomon Jones was born in Connecticut in 1756. He was one of eight children of Sarah Dunham Jones. The family moved to Fort Edward, New York early in his life and he took his first medical training at Albany. They were a prosperous family, involved in farming, milling, land speculation and local government. When the American Revolution began, Solomon served as Surgeon's Mate in Jessup's Corps and at this time, completed his medical training in Montreal. At the end of the war, he left to take up land in Augusta Township in the first wave of Loyalist re-settlement. He was accompanied by his wife and his mother. Three of his brothers, John, David and Daniel Jones also settled in the area.

Solomon's first grant of land was Lot 17 and the east half of Lot 18 in the First Concession. His final choice for settling down was Lot 22 and the east half of Lot 23, Concession 1, Augusta Township. His first home was a log

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cabin located closer to the St. Lawrence than Homewood. The family lived in this dwelling for 15 years. During this time, Dr. Jones established his medical practice in the community. He was the only doctor between Cornwall and Kingston. During this period, the family oral history tells of the time that there was a surprise visit to their home by Chief Joseph Brant, accompanied by 500 of his warriors (Brant had apparently been a friend of Solomon's in-laws, the Tunnicliffes).

By the time Solomon built Homewood (c. 1800), his family had grown to three daughters and three sons, his wife, his widowed mother, and a Negro servant girl named Elizabeth, purchased from his brother Daniel in 1788. His position within the community had also prospered. He received numerous appointments including: in 1788, Surgeon to the Battalion of Militia of Edwardsburg, Augusta and Elizabethtown(Brockville); member of the first Court of Request for New Johnstown; elected to the Second Legislative Assembly of Upper Canada (1796 – 1800); and in 1800, Judge of the District Court for the District of Johnstown.

The contractor/builder for Homewood was Louis Briere from Montreal. Building began May 10, 1800. Brière constructed a house, 48' by 38', two-storey and in stone. The house had a cellar seven feet deep, half the length of the house and the entire width of the house. The house had 28 windows. The house is Georgian in design, spacious and quite bright.

Jones' primary interest after settling in at Homewood was agriculture and the building up of a substantial estate. He accumulated in his lifetime 4,600 acres of land scattered through Augusta, Bastard, Kitley, Montague, Crosby, Gore, Wolford and Osgoode townships. Fruit farming was an interest of Solomon and became more so with his descendants. Solomon Jones died at Homewood in September 1822.

Solomon had seven children. His eldest was Jonathan Jones (born Sept. 15, 1788), who was educated at John Strachan's school. However, John died in 1816 and Solomon's estate passed to his other son, Dunham.

Dunham Jones ran Homewood until his death in 1876. Prior to taking over the farm, he served in the military. He was present at the Battle of the Windmill in 1838. By 1831, he had been appointed as a Justice of the Peace and for most of his life he also held the post of Collector of Customs for the Port of Maitland. As a businessman, he also held many other official positions throughout his life.

Farming activities prospered under Dunham's care. He produced and sold barley, rye, apples, cider, potatoes, oats and seed corn. He also raised sheep, cattle and bred horses. Dunham also produced axes and ploughs and may have run a general store business. Dunham added the stone kitchen wing to Homewood in 1822 and remodelled his father's surgery into a formal sitting room.

Andrew Jones inherited the property from his father Dunham in 1876. He made few changes at the house and his career was all about mixed farming. He was interested in fruit farming and enlarged Homewood's apple production. He also kept dairy cattle and sold butter and milk to local cheese factories. He raised sheep, kept hens and sold eggs. Vegetable crops included cabbage, potatoes, onions and squash. He augmented his income by drawing wood and gravel from his property.

After Andrew's death, his son Harold Jones inherited the property in 1905. Harold was responsible for specializing agriculture at Homewood into the large-scale production of apple crops, which won him both national and international acclaim. He developed the Jones Fameuse apple in 1900. In 1940, his son, Justus Jones, with his family, moved into a new addition on the west side of the house. Harold Jones and his children were responsible for major renovations at Homewood during the first half of the 20th century.

Possibly during Harold's tenure of the farm, a woodshed was added to the north of the 1822 kitchen wing. The actual date of this structure's construction is not known, and it appears in a few photographs that date to the 20th century. No photographs from the 19th century have come to light showing this building in place.

ARCHAEOLOGICAL INVESTIGATIONS

Prior to the 2000 field season, excavations on the property took place in 1979 by Rita Michaels, 1993 and 1999 by Dena Doroszenko. A total of 17,544 artifacts were recovered from these three excavation seasons from a variety of units placed in various areas of the property including areas where outbuildings once stood.

Based on the results of the 1999 field season, an area was opened for the purpose of public archaeology programs with local schools in the Brockville to Prescott area. This excavation was to the northwest of the main house, and south of the apple shed (Figure 1). This area was designated as Operation 9. During the 19th century, several outbuildings stood in this area including an ash pit, a privy and a smokehouse. Eight sub-operation units, labeled H, J, K, L, M, N, P, and Q were opened. Each unit was two metres by two metres in size. Prior to the first school program beginning, the author and a crew of three removed the sod layer from each of these units.

A total of 367 students (15 classes) came to the site between September 20 and October 3, 2000.

Each class was divided into two groups after arriving. One group headed into the museum and experienced a history lesson and tour of the museum in order to familiarize themselves with the history of the property. The second group remained outside, was given instructions by archaeological supervisors and then began to experience hands-on, excavating and screening (Figure 2). If the program was a half-day pro-

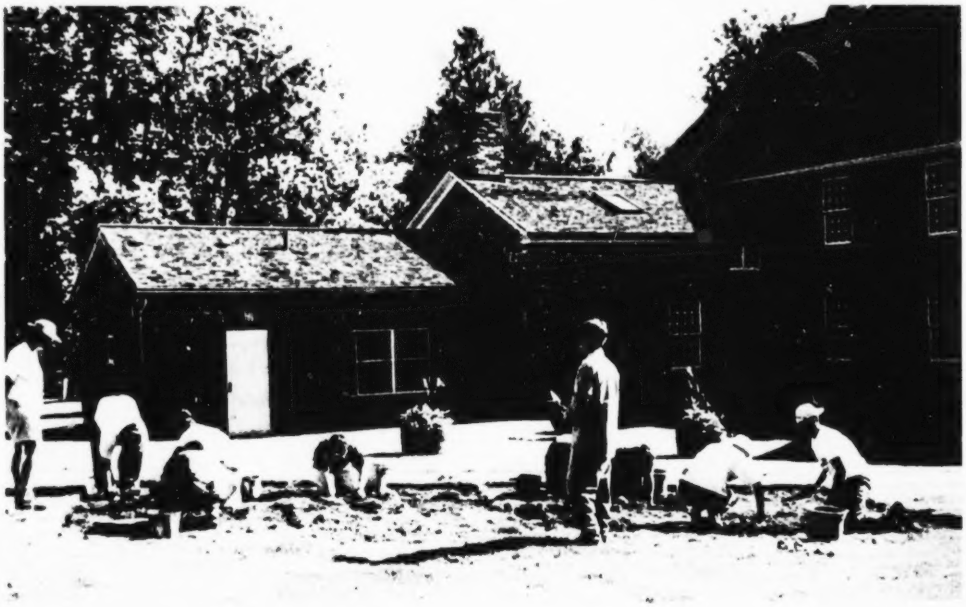

FIGURE 1. View of Operation 9.

gram, after a break, the two groups switched places. If the program was a full day program, each group spent a half-day either in the house or outside excavating. The full day programs also experienced workshops geared towards teaching the principles of archaeology and historic material culture.

While the excavation depth of Operation 9 was not substantial, the number of artifacts recovered was certainly larger than expected. A total of 10, 943 artifacts were recovered during the 2000 fieldwork.

As a result of the 2000 field season at Homewood, there are obvious remains representing the stone foundations of the smokehouse still remaining on the property. The excavations within Operation 9 clearly revealed the top of the area where the building once stood. The high frequency of artifacts is interpreted as representing a larger artifact deposit related to the privy area almost in the center of Operation 9. However, no deposits clearly delineating this area were defined in 2000.

FIGURE 2. Homewood School program in action.

PETUN AREA 2000

CHARLES GARRAD

INTRODUCTION

During 2000, the writer conducted fieldwork on two related Petun sites: McQueen-McConnell (BcHb-31), and Rock Bottom (BcHb-20). Both are in the Township of Nottawasaga-Clearview, Simcoe County. During the year several people with Wyandot ancestry visited and were shown the ancestral Petun area of Ontario.

THE McQUEEN-McCONNELL (BcHb-31) SITE

The excavation in 2000 of part of a disturbed midden on the McConnell segment of the McQueen-McConnell (BcHb-31) site, near Collingwood, Ontario, continued from previous years (1978, 1993, 1995, 1996, 1997, 1998 and 1999). Excavation was conducted as a research and public outreach project of the Petun Research Institute (Inc.), with the gracious consent of the site owners, Mr. & Mrs. William and Helen McConnell. The year's work was notable for including in the crew three presumed Petun descendants, Chief Janith English of the Wyandot Nation of Kansas, her son Darren English, Cultural Co-ordinator of the Nation, and Chief Ted Warrow of the Wyandot Nation of Anderdon. In addition Su Anderson, of the Mnjakining Ojibwa of Rama, occasionally visited as an observer. Other than the native participants, the formal crew included Irene Gibson, Gail Whitbeck, Joyce Long, Paul Dinsmore, Ph.D., and George Weider, Ph.D., with contributions from past-participants Melanie Priestman, Lyn and Larry Collis, Dave Hunt and Marjory Tuck, Glenn Kearsley, and Darrell Wines. Supervision and instruction were provided by Janet Turner, Ella Garrad and the writer. Casual visitors included Bill Fox and family from B.C., and various media representatives.

Excavation lasted one week in July, with time off for tours of the Petun area. Site preparation took place in advance of the excavation and the subsequent artifact analysis and report compilation occurred later. Five one-meter squares and the balks between them, comprising 1.289 cubic m of earth, were excavated by hand in 5 cm levels using trowel and screen to subsoil. All squares were backfilled. Artifacts were washed and conserved daily as part of the instruction. Analysis and recording took place during the fall and early winter.

There were 2,229 native artifacts, including fossils and quartzite (not certainly of native association), plus four modern artifacts recovered. Thermally cracked rocks were not counted and were left at the site. The recoveries were consistent with the existing interpretation of the deposit as belonging to the Proto-historic GBP1, ca. 1550-1600 A.D. Plain bodysherds (1,434, one of which has shell temper), 377 items of chert, and 139 of faunal bone, accounted for the bulk of the recoveries. The 45 typable rimsherds recovered comprised 33 Sidey Notched, 7 Huron Incised, 2 Innisfill Collarless, and one Black Necked, MacMurchy Scalloped and Niagara Collared. All these six types have been found in previous years. A clay human face effigy, found in an undisturbed level

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beneath the plough zone, is interpreted as broken from a smoking pipe, but otherwise smoking pipes are poorly represented (2 fragments). Chert (94%) is from the local Fossil Hill formation, the remainder consists of Kettle Point (17 fragments), Dundee and Onondaga (2 fragments each). Five formal chert tools (four scrapers and one projectile point) were all made from local Fossil Hill formation chert. There were two beads; a discoidal, centrally-drilled bead of sandstone, and a polished tubular bone bead. Fish vertebrae and turtle carapace fragments indicate faunal exploitation from the adjacent Pretty River. No European brass or copper was found in 2000. Otherwise, the year's recoveries coincide well with those from all previous years and confirm the GBP1 placement. Previous observations that the midden deposit, although extensively disturbed, still provides significant data when excavated carefully, were confirmed.

The role of the McQueen-McConnell site as the possible beginning of a continuous sequence leading to the historic Petun Deer people is still possible but not clear. It is concluded that further excavation here will not resolve the matter and hence cannot be justified. Equally unclear are the earlier (Toronto?) origins of the site. That the nearby Rock Bottom site is a successor village seems certain, but the Rock Bottom artifacts do not convincingly support the logical continuing evolutionary line of development to the later more northern "Deer" sites. An alternative possibility, although not supported by the contemporary records, is that the McQueen-McConnell people and descendants remained in the Pretty River Valley on several sequential sites through the entire Petun occupation until the dispersal. Work to clarify this hypothesis is needed on the other candidate sites.

THE ROCK BOTTOM (BcHb-20) ARCHAEOLOGICAL SITE

The Rock Bottom (BcHb-20) site is the next village north to the McQueen-McConnell site. The writer has long proposed, on minimal evidence, that the Rock Bottom site was of the GBP2 period, and thus likely to be the sequential successor to GBP1 McQueen-McConnell. A difficulty is that sequential villages usually, although not always, remain on the same drainage: the McQueen-McConnell site is on the Pretty River, one of a number of sites in the Pretty River Valley, but Rock Bottom is on Black Ash Creek, the next valley north.

In 2000 a Stage 3 Archaeological Resource Assessment was conducted on the Rock Bottom site, which is on property intended for development as the Osler Bluff Golf Club, by the consulting firm Archaeological Services Inc. The opportunity to apply the experience of a professional crew to the writer's research interests was exciting, hopefully leading to the immediate confirmation of the proposed GBP of the site, and potentially to a wider understanding of the Petun "Deer" sequence. This may or may not have commenced with the McQueen-McConnell site in the Pretty River Valley before progressing north through Rock Bottom and other sites to ultimately arrive at the Plater-Martin (BdHb-1) and Plater-Fleming (BdHb-2) sites near the shore of Georgian Bay in GBP3. During the work several new areas were found, and a second glass trade bead and more European metal were recovered.

The assessment work by the consultant concluded that the Rock Bottom site was an early 17th century Petun village. This writer submitted a separate report under his own licence (2000-022) because of his research interests, to confirm his interpretation of the Rock Bottom site as GBP2. It is the most probable successor to GBP1 McQueen-McConnell because of the high coefficient of similarity between the rimsherds of the two sites (172/200). The problem is that no GBP3 successor site to Rock Bottom is apparent. The Rock Bottom site enjoys high (150+/200) coefficients of similarity with no fewer than twelve local sites, but ten of these are contemporary or earlier, and the two which are of the later GBP3 are to the south, in "Wolf" territory.

Although much progress has been made in understanding the Petun through their archaeology, several interpretation problems remain. One of these is to determine what happened to the Rock Bottom people.

ARTIFACTS FROM THE LIMERICK LAKE SITE, HASTINGS COUNTY, ONTARIO

SUSAN M. JAMIESON

INTRODUCTION

This paper describes artifacts collected in 1997 by landowner Pamela Miller from a wooded, rocky point on the north shore of Limerick Lake, Limerick Township, Hastings County, Ontario. Limerick Lake drains by way of Beaver Creek to Crowe Lake, thence to the Crowe and Trent Rivers. Although water levels have been raised as a consequence of dam construction at St. Ola beginning in the 1870s (Boyce 1967:337), historical reports indicate that Limerick Township, like others in the Canadian Shield, contained numerous swamps and marshes prior to European disruption of drainage systems (Boyce 1967:334). The area currently is forested in maple, basswood, cedar, spruce and birch.

The site was marked by two large pits dug by Mrs. Miller, who described them as fire pits containing ash and cultural remains. These were situated roughly 25 m inland from the lakeshore (Figure 1). Pit #1, the largest, measured approximately 130 by 200 cm in planar dimensions and extended to ca. 20 cm below surface. Faunal remains from at least two beavers and a cervid were associated with this feature and remains of beaver, muskrat, deer and moose were surface scattered in all directions for a distance of some 6 m away from this pit. Pit #2 was positioned about 6 m northeast of Pit #1: it contained ceramics, a trap spring eye and shank, fresh water mussel shell, and an unidentifiable mammalian long bone fragment. Mrs. Miller eventually submitted these materials, along with an ash sample from Pit #1, to Trent University for identification.

The model of Native settlement that is most commonly used by archaeologists for this region of the Canadian Shield is based on ethnographic and historical data. It assumes that during the late fall and winter months, people lived in small, albeit extended family groups dispersed as microbands over wide hunting territories. In the spring, summer, and early fall, these extended family groups coalesced into macrobands at resource-rich and sacred locales. This is a variant of Binford's (1980:5) forager model, in which groups have high mobility, gather foods on a daily basis, and do not store surplus foods. Most sites are scattered and are used only for brief periods, hence artifact assemblages represent limited activities (Binford 1980:17). Although this model has been heavily critiqued in the archaeological literature (e.g., Wiessner 1982; Sassaman 1995), it does provide a basic framework from which to interpret the poorly-documented Limerick Lake site pits (i.e., the paucity of archaeological data does not permit sophisticated modeling and interpretation). These pits most likely represent hearths used for cooking, heat, and light at camps that repeatedly were occupied on a seasonal rather than a permanent basis. In the

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Department of Anthropology
Trent University
Peterborough, ON K9J 7B8

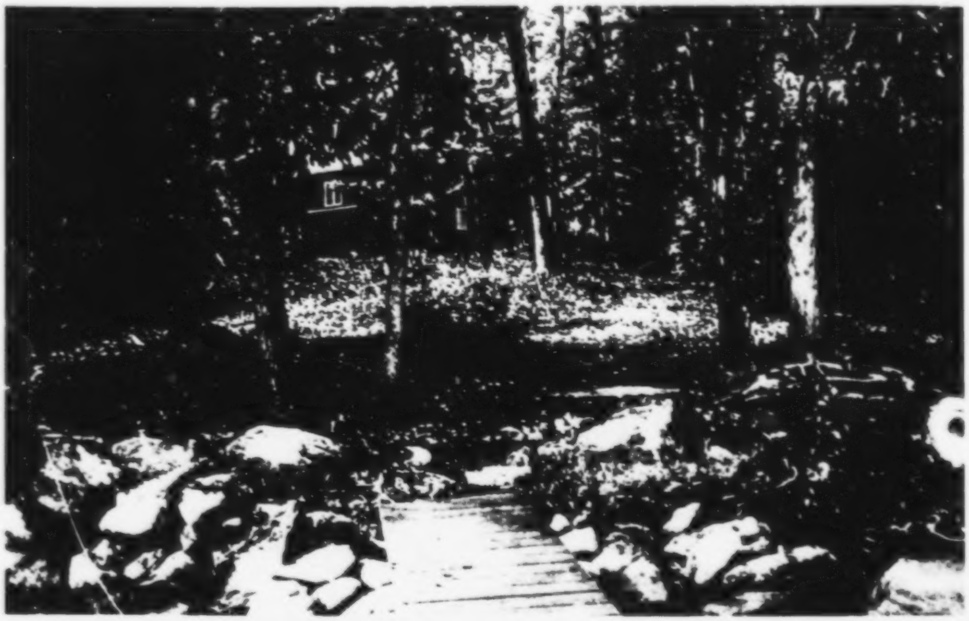

FIGURE 1. Photograph showing site vicinity. Pit features are located halfway up the slope to the left of the path. Photograph courtesy of P. Miller.

absence of formal excavation and recording, it is not possible to be more definitive about the pits themselves although their contents offer some additional clues.

PIT CONTENTS

TRAP

This artifact is represented by a snapped hand-forged hot-cut trap spring eye and shank of English design (Light 1987:29). Spring eyes and shanks of this type were of standardized form by ca. 1750 and are generally believed to predate the 1850s, after which machine-made traps became commonplace (Russell 1967:121; Light 1987:29; Stone 1974:277, 280). The eye is round, ca. 3.7 cm inside diameter and 8 mm thick (Figure 2). The shank varies from 5 mm thick just below the eye to slightly under 2 mm thick where it has broken across its width. It tapers from 24 mm in width below the eye to 47 mm at the break. Because this is only a fragment of a trap and there is no frame in the assemblage, it is difficult to determine what type of trap it may have been. Essentially, there are three basic trap sizes: small, medium and large, colloquially termed rat traps, beaver traps and bear traps. As Light (1987:27-28) observes, with hand made specimens such as this there are wide variations within these sizes but there is "still a necessary correlation between the size of the trap and the kind of animal being trapped, because if the trap is too small or weak it will not hold the animal, whereas if it is too large it will break or cut the animal's leg and the trapper will lose his fur." It is not a straightforward matter to determine trap size from the spring, as many traps were double-eyed: the larger eye slid up the jaws and was always larger than the lower eye which rested on the frame below the jaw post. However, slight wear marks

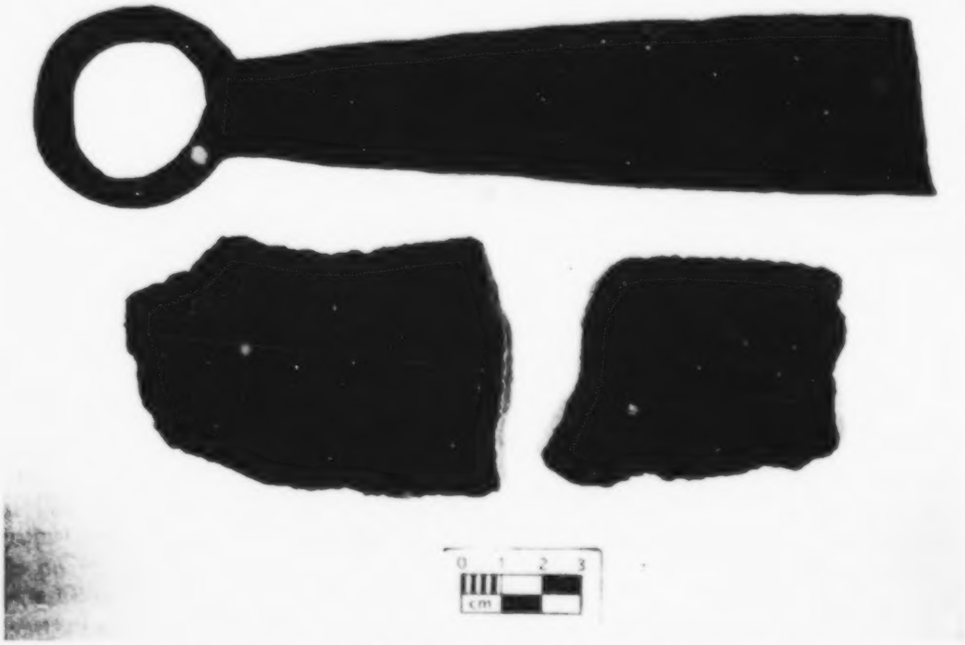

FIGURE 2. Trap spring, rim and body sherd exteriors, Limerick Lake site. Photograph courtesy of K. Nahrgang and J. Gwilliam.

on the inside of the eye indicate that the specimen in this assemblage is likely the upper spring from a large trap.

CERAMICS

Because relatively little archaeological work has been carried out on Late Woodland non-Iroquoian sites from this part of eastern Ontario, there is little comparative data from the region for the site's ceramics. Generally, however, the sherds bear similarities to vessels from elsewhere on the Canadian Shield that were made by Algonquian-speaking peoples (Wright 1981:95) as recently as the eighteenth, or possibly even the early nineteenth century (Wright 1965:197; personal observation). The five sherds in the assemblage appear to have come from a single vessel (Figure 2).

These sherds are composed of mineral-tempered clay. Inclusions in the grit temper are primarily quartz or quartzite, with some feldspar. Using the Wentworth scale of measurement (Rice 1987:38), the size of these inclusions ranges from that of very fine sand (0.05 mm in diameter) to that of gravel (greater than 2.0 mm in diameter). The vessel is well made, with a well-knit paste. Laminar bedding, indicated by laterally oriented inclusions, suggests manufacture by the paddle and anvil or pinch-pot method.

The description of vessel form is limited by the limited ceramic sample, which includes one sherd from the body, three rim/neck sherds, and one neck sherd. The shoulder/body area is missing. The vessel is globular, has a constricted neck, flaring out sloped rim, and flattened lip that has been thinned on both exterior and interior margins. Thickness at lip ranges from 5 to 7 mm; thickness 10 mm below the lip ranges from 7 to 9 mm; thickness at neck constriction ranges from 7 to 9mm; and the height of the neck at constriction ranges from 30 to 35 mm. The body sherd is from 5 to 9 mm thick. Interior orifice diameter is estimated at 280 mm, which makes this a large vessel.

The exterior, lip, and interior of the vessel were smoothed prior to being decorated. The exterior decorative motif consists of a single row of right oblique cord-wrapped object impressions below the lip. Impressions indicate that the cord was S-twist. Below this are single-element (possibly babiche) wrapped object impressions arranged in three to four horizontal bands above a row of rectangular punctates. The punctates, which encircle the exterior neck at the maximum point of constriction, are 5 mm long, 3 mm wide, and up to 7 mm deep. There are at least four bands of right oblique single-element wrapped object impressions below the punctates. The lip is decorated with right oblique cord-wrapped object impressions. The vessel interior is decorated with two horizontal bands of right oblique cord-wrapped object impressions below the lip. Beneath this is a row of bosses. These bosses are considered to be decorative techniques in their own right. The exterior vessel body is smoothed over cord-wrapped paddle, and the interior is smoothed. Evidently, a number of different tools were employed to decorate the vessel.

FAUNA

The assemblage contains 65 animal bones or bone fragments and 14 pieces of Pelcypod shell identified by Mr. David Cruz. Owing to the highly fragmentary nature of some specimens, 7 bones can only be identified as belonging to cervids and 27 bones can only be identified as coming from mammals. The remaining 31 bones come from species which favour lake margins, swampy areas and/or wooded habitats such as those in the site vicinity:

1) *Castor canadensis* (beaver) - at least 3 individuals associated with Pit #1 are represented, ranging from immature through subadult to adult in age. The robust structure of the adult mandible and maxilla suggest that this individual was male. Beaver bear one litter of young a year, which are born in the period between late April and late June. They mature sexually during their second winter (Banfield 1974:161). Beaver pelts are at their prime in winter (Russell 1967:98-100).

2) *Ondatra zibethicus* (muskrat) - two adults are represented from surface provenience. Their sex cannot be determined. Muskrat young are born in the late spring or early summer (Banfield 1974:199). This species is most easily trapped in autumn, when they tend to move away from their aquatic habitat and move overland (Burt and Grossenheider 1964:204), although their pelts are at their prime in winter (Banfield 1974:199).

3) *Odocoileus sp.* (deer) - two individuals are represented, one immature the other adult. Sex cannot be determined. Surface provenience. White-tailed deer are born between April and September (generally between late May and mid-June) and reach maturity between 13 and 18 months, sometimes earlier (Banfield 1974:393).

4) *Alces alces* (moose) - three individuals are represented, these range in age from immature to adult. Their sex cannot be determined. Surface provenience. Moose young are born in late May or early June. They reach maturity at 16 to 30 months of age (Banfield 1974:396).

5) *Pelcypod* (fresh water mussel) - the number of individuals represented by the shell fragments cannot be estimated. Associated with Pit #2.

One noteworthy aspect of this faunal sample is the absence of fish bone. Limerick Lake was initially mapped as Salmon Lake owing to the plentitude of trout (Boyce 1967:334), and fish made up a large percentage of Shield dwellers' diets if it was available. It may be that small bones were overlooked during collection or have not preserved; however, if fish bones were plentiful, a few might be expected to have been present in the ash sample taken from Pit #1 and sent to Trent University for identification. However, this was not the case. Age profiles of faunal remains from this feature do not present an adequate base from which to draw strong inference as to the season that Pit #1 may have been created but, nonetheless, suggest an autumn or early winter use. This is consistent with traditional Native methods of hunting beaver, the vast majority of which require ice to have formed before they can be employed (e.g., Russell 1967:97-100; also see Rogers 1962:C7-C11). Faunal remains scattered on the surface near Pit #1 most likely indicate late winter or early spring subsistence and trapping activities (Rogers 1962:C11-C14).

In contrast, the faunal remains from Pit #2 are dominated by the shells of fresh water mussels. These would have been available only during the warmer months of the year, at which time lacustrine resources were plentiful and extended family groups may have come together in large multi-family bands (Landes 1937:1; Rogers 1962:C4-C6). This scenario is consistent with the relatively large size of the ceramic vessel, i.e. there would have been more people who had to be fed, hence the need for larger cooking containers. Why there should be a trap spring fragment associated with this feature is problematic from the perspective of fur acquisition, as pelts are at their prime during the winter. It may be that lesser-quality pelts were being trapped "off season." However, beaver were also prized year-round for their castoreum, which had a ready European market, and for their meat, which was eaten by Natives (Banfield 1974:158). Alternately, the trap spring may have been curated as a potentially useful piece of metal prior to its disposal or may have accidentally found its way into Pit#2.

CONCLUSIONS

Although conclusions are limited by the nature of the sample presented for study, the site appears to represent at least two seasonal camps. It is probable that there are other pit features in this vicinity that have yet to be detected. The styles and manufacturing techniques of the Native ceramics and iron trap suggest a late eighteenth or even early nineteenth century date for the Limerick Lake site. However, the dating of the site is not a particularly straightforward matter.

In the 1640s and 1650s, the Algonquian-speaking peoples living in eastern Ontario (including the Limerick Lake area) were dispersed northwards. This was following a series of epidemics and repeated raids by the Haudenosaunee. Within a generation some of these peoples, who had allied themselves with related Ojibwa, Nippising, and Mississauga peoples, returned to the region (Hammond 1904; Jennings 1984:207; Orr 1915, 1917). This brought them into conflict with the Haudenosaunee over trade routes, as the latter had "outposted" southern Ontario in small groups (Konrad 1981). By aligning themselves with remnant Huron and Ottawa, the Algonkians were able to disperse the Haudenosaunee from Ontario and to negotiate peace by 1701 (Eidt 1979). Within a generation, the Mississaugas could be found all over Ontario, west of Kingston (Orr 1915:19).

There had been a prosperous fur trade with the French in the Quinte area during the 1600s, culminating in the establishment of Fort Frontenac at Cataraqui (Boyce 1967:19). Although Fort Frontenac was abandoned in 1689, as a consequence of raids by the Haudenosaunee, the French were able to re-establish it in 1695 with the assistance of their Algonkian allies. In 1758 it was destroyed by the British. Following the Treaty of Paris, 1763, the British closed off the Quinte region to European settlement until treaties could be arranged with Natives and for a time the focus of the fur trade shifted to Montreal, the Ottawa River, and the Upper Great Lakes (Boyce 1967:19). After 1784, British settlers were permitted to settle the Quinte area and many of these individuals traded with the Natives for furs (Boyce 1967:32). Even as late as 1863, trapping was reported as being very profitable in Limerick Township (Boyce 1967:334).

The most parsimonious argument regarding the age of the English style trap from the site, hence the approximate age of the deposit in which it was found, is that it post-dates the 1784 British settlement of the Quinte area. Given that the trap is hand made, it most probably pre-dates the 1850s, after which time metal artifacts were increasingly machine made. However, the trap could possibly pre-date British settlement of Quinte: there is not enough of the complete specimen present to deduce whether or not it is truly of standardized form and British style traps could have been traded over large distances, even into the territory controlled by New France. At the other end of the time scale, blacksmiths continued to hand-make objects into the late 19th century in Ontario and/or the trap could have been in use for several years before it broke. The presence of an aboriginal pot in the same feature as the trap part suggests a date prior to roughly the mid-1800s, by which time many Native peoples were adopting European ceramics. However, without good contextual information it is by no means a certainty that the vessel's sherds and the trap spring eye and shank were deposited in the same occupation episode: elsewhere, specific loci are known to have been in seasonal use for tens, hundreds or even thousands of years. Finally, the trap spring fragment is not particularly corroded, even though it has been in ash (which retains moisture). The best estimate, then, is for a late eighteenth to early nineteenth century date for the site, and given the condition of the metal, it was probably deposited later within this time span rather than earlier.

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MILITARY SITES ARCHAEOLOGY, PARKS CANADA, ONTARIO SERVICE CENTRE: 2000

JOSEPH LAST

During the 2000 field season, archaeologists from Parks Canada, Ontario Service Centre, undertook investigations at several military sites in Ontario. Each project shared a common goal of assessing, evaluating, and mitigating potential impacts on cultural resources. Project-specific research strategies varied from site to site, as did the field methods adopted. At Fort George, Niagara-on-the-Lake, mechanized trenching augmented with hand excavation helped to define the historic southern boundaries of the site (Sattelberger this volume). Similar techniques were also successful at Fort Malden, Amherstburg, where the remains of the 1799 northwest bastion and associated features were located and examined. Along the glacis at Fort Mississauga, in Niagara-on-the-Lake, a combination of mechanized sod stripping, augering, and hand excavation assisted in evaluating the proposed route of a pedestrian pathway. Within the enceinte of the fort, hand excavation furnished information about the fort parade, sally port, and the eastern gun emplacement. Only one monitoring project is reported here. It consisted of supervising the excavation of footings for an extension to the compound garage at Fort Malden. By increasing our knowledge and appreciation of the historic resources within the respective study areas, these projects allowed us to provide informed recommendations to Site Managers. They also contributed to our ongoing strategy for resource preservation and presentation.

FORT MALDEN NATIONAL HISTORIC SITE

COMPOUND INVESTIGATION

During early April 2000, the author undertook a one-week investigation of the maintenance compound at Fort Malden National Historic Site (Figure 1). The primary aim of the excavation was to assess impacts to cultural resources resulting from a proposed extension to the compound garage. While investigations conducted in 1996 revealed no significant historic features in the area, they did uncover a sheet scatter of artifacts associated with the glacis of Fort Malden (Last 1997). Consequently, mitigation of the garage extension focussed on monitoring of the footing excavations and the subsequent stratigraphic analysis of deposits encountered. An additional aim was to integrate the present findings with those of the 1996 investigations.

HISTORY OF THE COMPOUND AREA

Initially conceived as a depot, Fort Malden soon became a defensive position of modest strength. Early plans of Fort Malden depict it as a four-

Parks Canada Agency
Ontario Service Centre
111 Water St. E.,
Cornwall, ON K6H 6S3

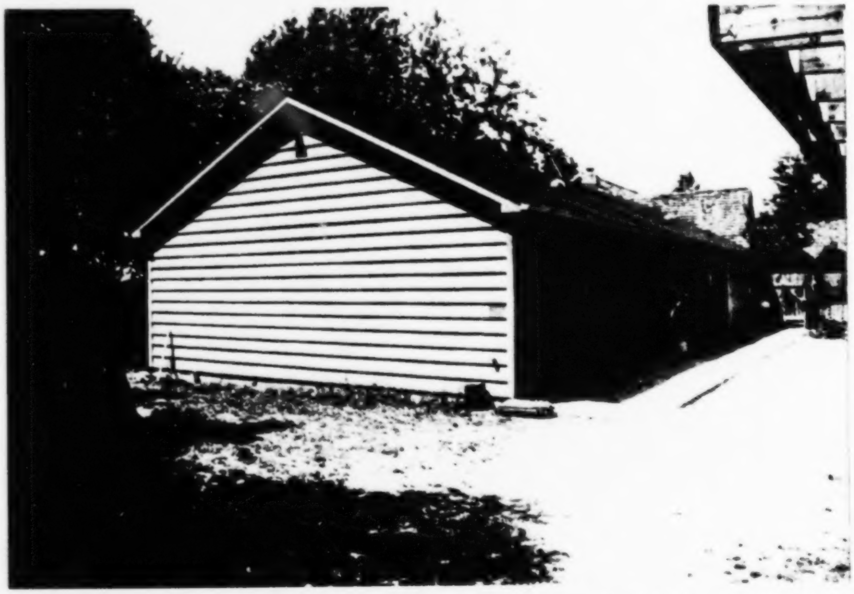

FIGURE 1. Overview of the maintenance compound at Fort Malden N.H.S. Photo by S. Mills. Parks Canada, Ontario Service Centre (Cornwall). Photo no. 4H-1334M.

sided, bastioned work overlooking the shipping channel of the Detroit River. By 1801, palisaded curtain walls defined the trace of the fort (Carter-Edwards 1980). A ditch and glacis were additional defensive elements fashioned during this time. The present compound, located beyond the original fort, lies some 25 m north of the crest of the original 1799 glacis (Figure 2).

The configuration of Fort Malden remained the same until 1813 when occupying American forces transformed it into a smaller work. Captain Gratoit, U. S. Army Corps Engineer, reduced the length of the northern rampart by one half. He also had the northwest and northeast bastions moved approximately 55.0 m farther to the south. Still, the northern glacis appears as clear ground, remaining so until 1845 when the Commanding Officer allocated the area as a garrison garden (Carter-Edwards 1980). The area served this function until an Order in Council, dated June 8, 1859, transformed Fort Malden into a lunatic asylum.

In 1875, the Department of Militia and Defence transferred the Ordnance Reserve, of which Fort Malden was a part, to the Department of the Interior. By August, the Department had divided the property into villa lots and disposed of them through auction and lease. Lot 6, immediately north of the fort and now the location of the maintenance compound, was subsequently subdivided for residential housing. On the south half of the lot, Franklin A. Hough had his residence. It was a large, two and one-half storey, frame structure measuring 45 feet north-south by 35 feet east-west (Parks Canada, OSC Registry, [OSCR]1973) (Figure 3). In 1956, he sold it to William and Gertrude Thompson. The Crown eventually purchased the property from them in 1974.

The old Hough home dominated the north glacis until 1974. In that year, park staff demolished the structure to make room for the main-

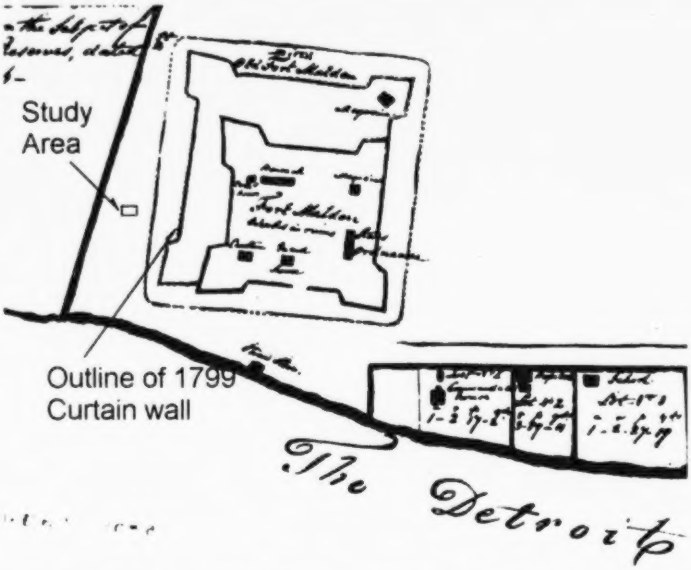
Study
Area
Outline of 1799
Curtain wall
Old Fort Malden
Fort Malden
The Detroit

FIGURE 2. Plan of the fort at Amherstburg, dated 1836. Note silhouette of the earlier and larger work. NMC, H4/440 – Amherstburg – 1836. Study area to the north of the 1799 fortifications.

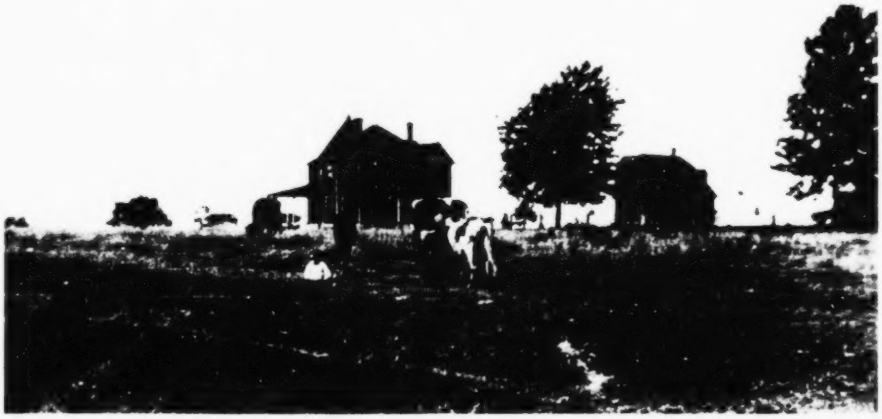

FIGURE 3. View of the original Hough residence on the south half of lot 6, ca. 1914. Photo from the Fort Malden N. H. S. Photo Collection.

tenance compound and the newly acquired Pensioner's Quarters. Subsequent modifications to the compound area occurred in 1988 when park personnel extended the garage to its present size. During this period, the Park installed many services within the compound. They include alarm, telephone, hydro, gas, drainage, water, and sanitation lines.

PAST ARCHAEOLOGICAL INVESTIGATIONS

In support of an earlier proposal to extend the compound garage to the west, Archaeological Services, Ontario Service Centre, investigated the area in 1996. Employing two excavation units, Stephen Mills examined a narrow corridor between the garage and the fence that presently delineates the western limits of the compound (Mills 1996). He also opened a test pit near the compound's southern entrance.

During his investigations, Mills documented several disturbances within the compound. They resulted from the demolition of the original Hough house, service line installations, and the 1988 extension of the maintenance garage. The investigation introduced us to the stratigraphic sequence within the compound characterized by a layer of demolition fill and successive deposits of stone dust and gravel.

Mills also noted that the 'B' Horizon was not well developed and that the differentiation between it and the historic 'A' Horizon was indistinguishable. Since the organic layer sat immediately upon the naturally occurring 'C' Horizon clay, he logically interpreted it as the original occupation layer associated with the north glacis of the 1796/99 fort. Post excavation review of the artifact assemblage from this occupation, along with Mills' observation of its undeveloped nature, lead the author to question its date of deposition. The total absence of material from the War of 1812 suggested an interpretation more complex than originally conceived. Fortunately, the proposal to extend the garage permitted additional study and review of our 1996 findings.

THE 2000 STUDY AREA

The recent investigations focussed on the footprint of the proposed garage extension. The study area measured 7.5 m east-west by 9.5 m north-south. It covered the entire width of the garage and extended south from the building to the existing compound fence. Within the study area, investigations were limited to the "U"-shaped corridor resulting from the excavation of three discontinuous trenches. Together, they formed part of the footing trenches for the structure. Mechanically cut by a 337 Bobcat, the trenches varied in depth from between 0.33 and 0.87 m below present grade and ranged from 0.65 to 0.70 m in width.

INTERPRETATION AND PHASING

The investigations encountered a uniform stratigraphic sequence throughout the area. Twenty-four discrete deposits, representing five major phases of the site's development, were recorded. Together they chronicle the evolution of Fort Malden from its construction to the present. They are, in sequential order: the preconstruction deposits, the 1796 construction phase, the refurbishing of the site in 1839/40, the Hough and Thompson's residencies, and the recent historic site period [1974 to 2000].

PHASE I: NATURALLY OCCURRING SOILS (PREOCCUPATION)

Naturally occurring 'C' Horizon clays were present in all units excavated to the depth of 0.65 m below grade. As observed elsewhere at the site, the 'C' Horizon was a tenacious, hardpan clay deposit. Excavations also detected localized areas of veining. Confined to the uppermost elevations of the 'C' Horizon, the lenses are less than three centimetres in thickness and are characteristically composed of yellowish brown friable clay. As expected, neither the 'C' Horizon nor its lenses contained artifacts.

PHASE II: 1796/99 CONSTRUCTION

Little evidence remains of the initial 1796/99-construction phase. However, the investigations uncovered localized areas of in situ burning. Oxidization of the soil was noticeable both upon and within the 'C' Horizon. Possibly the result of a clearing activity, the burn may represent an early attempt to remove vegetation from the 1796/99 glacis. Receipts of the Royal Engineer Department document such clearing activities:

> As part of the preparation of the fort's defensive system, Military working parties from the R.C.V.'s [Royal Canadian Volunteers] were employed clearing and burning the brush surrounding the fort (Carter-Edwards 1980:69).

Where exposed, the burn measured 0.75 m north-south by 0.32 m east-west. The maximum thickness of the feature was 10 cm. Unfortunately, the deposit lacked artifacts. As a result, temporal confirmation of the activity is not presently possible.

PHASE III: REFURBISHING OF THE SITE (1839-1840)

The earliest occupation encountered in the compound was not from the expected 1796-1814 period. Instead, an occupation layer dating to the 1840s lay immediately upon the 'C' Horizon (Figure 4). Apparently, a commanding Royal Engineer had had the original 'A' Horizon, and associated occupation, removed. Commonly, engineers employed sods to help stabilize earthworks, revet scarp faces, and to arrest the damaging effects of erosion (Mahan 1968). Such activities occurred during the initial building phase of Fort Malden and again when the Americans transformed the site in 1814. However, the absence of artifacts dating to the War of 1812 suggests that this sod stripping activity was of a later date.

Fort Malden underwent another phase of

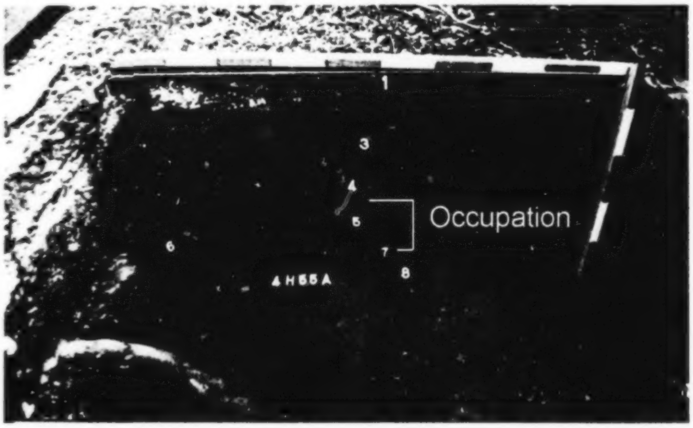

FIGURE 4. North profile of unit 4H55A showing occupation layer, above the naturally occurring 'C' Horizon. The layer dates to the 1840s. Facing north. Photo by S. Mills, Ontario Service Centre (Cornwall). Photo no. 4H-1354m.

rehabilitation in 1839/40. Then, Captain Biscoe, Commanding Royal Engineer at Fort Malden, oversaw modifications to the site. He supervised the installation of picketing within the ditch, improvements made to the bastions, and the refashioning of the defensive ditches (Carter-Edwards 1980). Perhaps he had the sod and underlying 'B' Horizon soils removed during the revetting of the ditch and bastions. While undocumented, it is also possible that Biscoe used the soil to bury the depression of the 1799 ditch. This speculation is based on the fact that the last plans to show the relationship between the 1796/99 fort and the more recent defensive work date to the 1830s.

PHASE IV: THE HOUGH AND THOMPSON'S RESIDENCIES

The earliest occupation layer found within the compound postdates the 1830s. Both domestic and architectural items are present. The ceramic assemblage consists of refined white (62%) and vitrified earthenwares (38%). Although the sample size is small, the assemblage represents a temporal range from the 1840s to the 20th century with the majority of the items falling 1860 and the 1890s. In relation to site evolution, this corresponds to the period following the sale of the land by the Department of the Interior.

Stratigraphic analysis has also identified several deposits, which although lacking datable artifacts, are associated with the Hough's and the Thompson's occupancies. In particular, investigations uncovered a buried sod at the depth of 30 cm below grade. This layer once formed the front lawn of the property and was actively used between 1915 and 1974.

PHASE V: THE RECENT HISTORIC SITE PERIOD (1974 TO 2000)

Since transfer to Parks Canada, many landscape alterations have occurred within the study area. The most evident has been the area's transformation from a residential lawn and driveway to a functional compound. Investigations revealed a moderate increase in elevation. Recent overburden measures between 30 and 60 cm. In fact, most of the layers encountered date to 20th century deposition of bedding material, gravel, and service trenches.

Besides the services recorded in 1996, the most recent investigation located a sewer line. It runs northwest-southeast between the Visitor Orientation Centre (V.O.C.) and the southeast corner of the garage extension. Only 33 cm below grade, Park personnel encased it in a rectangular concrete jacket. Only minimally examined, the present study exposed it for a distance of 2.59 m.

CONCLUSIONS

The recent mitigation provided an opportunity to revisit the compound area and to compare findings with those undertaken in 1996. In particular, it furnished the chance to examine the earliest cultural deposits associated with the north glacis of Fort Malden. Of note is the fact that the original 'A' Horizon was removed during the second British refashioning of the fort. While undocumented, Captain Biscoe apparently recycled the sod during the site's refurbishing in 1839/40.

Although supplementary sampling would help to refine the dates of deposition for several cultural layers encountered during the investigations, further work within the compound is not essential. This is especially true if construction is confined to the established corridors.

FORT MALDEN NATIONAL HISTORIC SITE: NORTHWEST BASTION INVESTIGATION

In early July 2000, a four-person crew carried out a weeklong investigation at Fort Malden National Historic Site. The principal goal of the project was to locate and define the northern extent of 1796-1799 fortifications. In particular, our investigations hoped to determine if any vestiges of the original 1799 northwest bastion and associated ditch remain. Other aims were to evaluate and document the formation processes involved in their construction, refashioning, and subsequent abandonment.

Information provided by the investigation would further our understanding of the trace of the initial works at Amherstburg. While we have attempted to delineate the first fort using extant features and historic plans, their accuracy required 'ground-truthing'. If the northwest bastion could be found, it, along with the extant southwest bastion, would assist in fine-tuning our cartographic over-lays and superimpositions.

HISTORY OF THE NORTHWEST BASTION

In 1799, work began on enclosing Fort Malden by raising earthworks and installing a palisade. Typical for the period, the defensives consisted of a four-bastioned trace with an associated ditch (Vauban 1968). Gother Mann, then commanding officer of the Royal Engineers in Canada, proposed each bastion be framed and faced with timber in a manner similar to Forts George and St. Joseph (Carter-Edwards 1980) (Figure 5). To strengthen defences, Captain McLean had the bastion ditches deepened to eight feet and augmented them with a single-line palisade.

The northwest bastion was the first to be completed, perhaps because of its commanding position overlooking the Detroit River. However, by 1802 Captain Bruyères, in his report on the condition of the site's defences, stated that repairs were already required.

> … It will be necessary to clear the bottoms of the Ditches of the three other Bastions [which included the northwest] and to Sod the Counterscarp - the soil being wet clay, the Counterscarps have been washed down … and filled about 2 feet above the bottom of the picketing (Carter-Edwards 1980:90).

With the possibility of war, Bruyères ordered

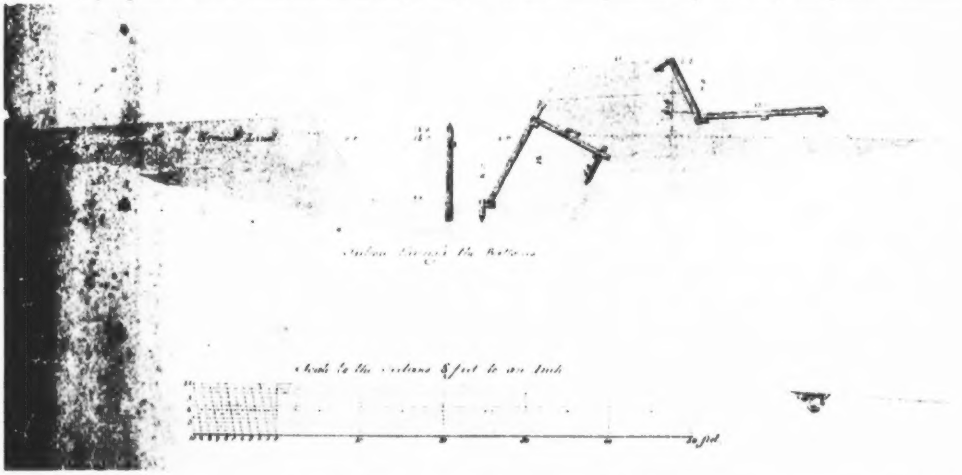

FIGURE 5. Detail of "Plan and Sections of the Works of Defence proposed to constructed at Amherstburg, Upper Canada". Gother Mann, 21 January 1799. National Archives of Canada: Cartographic and Architectural Division, NMC-22930.

the reconditioning of the bastions and their fraising with cedar pickets in 1812. The bastion remained relatively unaltered until American forces occupied the work. During their stay, they modified the fort by substantially reducing its size. When completed, only the original southwest bastion remained part of the re-worked fortification.

Little is known about the fate of the abandoned northwest bastion. Vestiges of its trace are depicted on plans dating between 1823 and 1838. We hoped that, if successful, our investigations would provide first-hand knowledge about this defensive feature. Site personnel supported this goal since they consider visitor understanding of the first Fort Malden an important element of on-site interpretation.

STUDY AREA AND METHOD OF EXCAVATION

Based on cartographic overlays, we expected the 1799 northwest bastion to be sandwiched between the existing 1838/40 bastion and the re-located Pensioner's Cottage. If the superposition of the historic plans was correct, the 1799 ditch should truncate the present V.O.C, cutting the structure approximately in half. In order to verify our plans, we oversaw the mechanical cutting of an exploratory trench.

Our challenge was to minimize disturbance to existing trees while maximizing potential archaeological information (Figure 6). We finally settled on a location that was 19.37 m west of the rear V.O.C porch and 14.5 m south of the Pensioner's Cottage. Initially, 15 m long, and 1.0 m wide, we eventually lengthened the trench by a metre, deepened its northern end to a depth of 2.7 m below surface, and widened it an additional 0.65 m. Once excavated, we hand-cleaned the trench walls in order to investigate the stratigraphic sequence and examine uncovered features. All diagnostic artifacts found associated with the profiles were recovered to assist in the dating of the exposed deposits.

The test trench was extremely successful. It provided an oblique north-south section through the east face of the 1799 northwest bastion and associated ditch floor. Remains of the original timber revetment, palisade line, and wooden drain were also uncovered, as was evidence for the raising of the fort during Proctor's hasty retreat.

STRATIGRAPHIC SEQUENCE

The investigations encountered a total of 50 discrete stratigraphic layers. Dating of the deposits is rather problematic since the profile lacked the diagnostic artifacts required for that purpose. All phasing, therefore, is based on stratigraphic imposition and correlation to historic documentation.

PHASE I: INITIAL CONSTRUCTION (1799 TO 1813)

Consistent throughout the test trench are naturally deposited 'C' Horizon clays that run along the entire floor of the trench. For the majority of the unit, the deposit lies at a depth of 0.80 m below surface. It is a multi-striated layer containing thin veins of pure white clay. Of note is the fact that, within the footprint of the bastion, we observed neither 'B' nor 'A' Horizon soils. Since sod was always a premium commodity, perhaps Captain McLean had the sods removed to stabilize the upper portions of the bastion. Three layers of fill were subsequently deposited upon the 'C' Horizon and form the bastion base. All lie within (to the south) of the scarp face of the bastion and within the gorge of that feature.

Within the northern six metres of the excavation unit, the 'C' Horizon dives drastically to a depth of 2.75 m below present grade. Purposefully cut to form the scarp face of the bastion, the slope is quite steep having a grade of 65 degrees. The floor of the ditch varies in depth being 30 cm higher where the ditch floor meets the counterscarp.

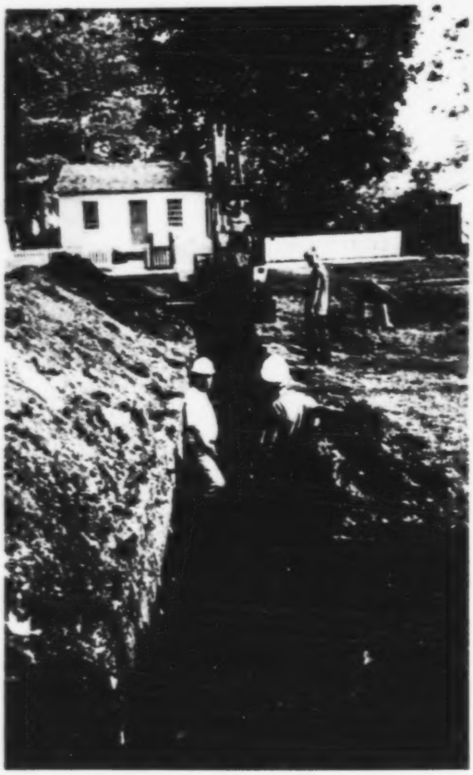

FIGURE 6. Extending the trench to the north. Pensioner's Cottage in background. Photo by V. Sheehan. Parks Canada, Ontario Service Centre (Cornwall). Photo no. 4H-227W.

Excavation revealed a slit trench, measuring 55 cm in width, cut into the 'C' Horizon clay at the base of the bastion. Inserted into the trench is a 40 cm by 35 cm sill plate. A 15 cm by 12 cm slot has been mortised longitudinally into the upper side of the sill in order to anchor vertical timber facing (Figure 7). Evidence of the planks was observed as an oblique deposit of ash and oxidized soil. The burn lens adjoins the sill plate (which was spared burning) and mirrors the slope the bastion scarp. Once the fatigue parties installed the revetment, they filled the space behind the planks with compacted clay and brought the face of the bastion out to a 70-degree angle. The fact that the revetment was totally burned indicates that during his hasty retreat in 1813, General Proctor raised more of the site than was first thought.

The remains of four palisade posts ran on a slight diagonal across the trench. They were aligned parallel to the bastion face and approximately 1.8 m to the north (Figure 8). The posts show no evidence of burning, but were chopped at ground level. In all likelihood, Proctor had this line of defence cut down before evacuating the site. The posts measure 18 cm in diameter and were set 4 cm apart. A horizontal ribbon was associated with the palisade. It lay on the interior (south) side of the palisade and just above the ditch floor. The upper width of the palisade footing trench was approximately a metre and backfilled with heavy, plastic clay. A working surface of greyish clay containing numerous small wood fragments lay above the ditch floor. The deposit was confined to the area between the revetment sill plate and the palisade.

North of the palisade, but still within the ditch, lay a wooden box drain. Fashioned from planks secured by wrought nails, the drain had external measurements of 27 cm wide by 21 cm high. Although heavily silted, it still functioned. The feature is located at the foot of the counterscarp and about 2.4 m below present grade. It was set into a 60 cm-wide trench and covered with a clay backfill.

The route of the drain appears to conform to the configuration of the historic bastion. While attempts were made to trace its path using a fibre-optic camera, extensive silting prevented the camera from travelling any distance down the drain. After several endeavours the effort was aborted.

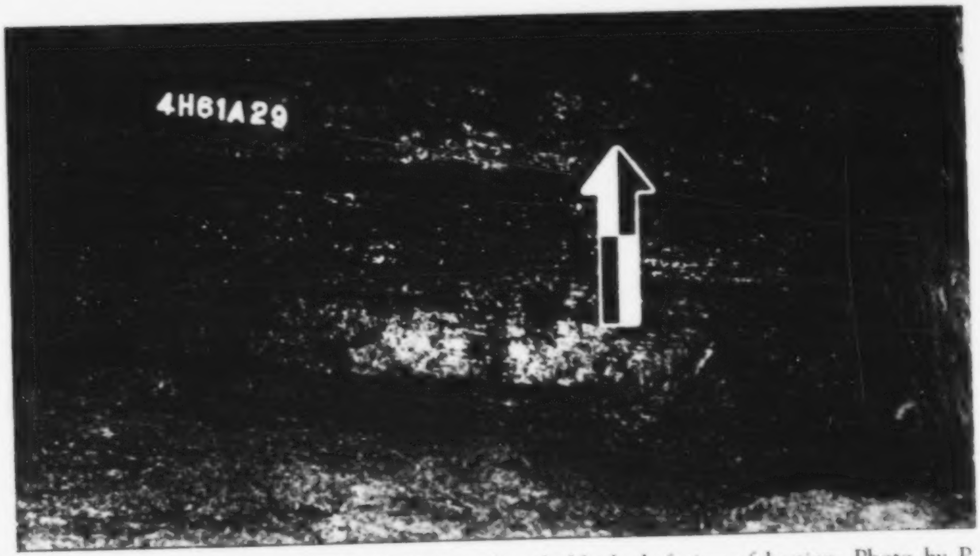

FIGURE 7. View of mortised sill plate used to hold plank facing of bastion. Photo by P. Sattelberger. Parks Canada, Ontario Service Centre (Cornwall). Photo no. 4H-249W.

PHASE II: AMERICAN OCCUPATION (1813-1815)

During the American occupation of Fort Malden, little if any attention was paid to the bastion. Although the Americans constructed a newer bastion to the south and in the shadows of the first, they made no attempt to remove the original work. It appears that they left the bastion to degrade through natural agencies. This it did. Over time, erosion altered the scarp face to a 45 degree incline. Eventually, three fills softened the slope of the scarp and partially filled in the area south of the palisade line. Two well-developed buried sod lines cap these deposits suggesting that the filling activity was interrupted by two discrete hiatuses.

Of note is the fact that the silhouette of the first fort is shown on an 1823 plan of Fort Malden. This indicates that the ditch, if not the bastion, was left untouched until the return of the site to British command. Perhaps the American forces used the earlier bastion as part of a two-tiered cavalier system.

PHASE III: BRITISH MODIFICATIONS (1838-1840?)

An effort to fill in the ditch occurred sometime after the evacuation of the American Forces. Although not documented historically, we believe that the British modified the bastion during, or shortly after, reworking of the site in 1838-1840 (the trace of the first fort is no longer seen on plans dating to the 1850s). At this time, they deposited a very robust layer of fill into the ditch. It, along with two other fill deposits, is capped by a series of buried 'A' Horizons.

PHASE IV: FORT MALDEN NHS (CA. 1930S?)

Another major fill episode followed the first. Unfortunately, excavation recovered no diag-

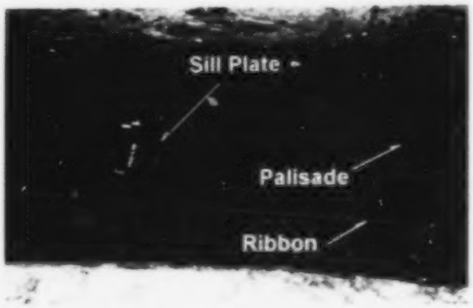

FIGURE 8. View of bastion sill plate and palisade posts. Note ribbon used to fasten palisade. Photo by P. Sattelberger. Parks Canada, Ontario Service Centre (Cornwall). Photo no. 4H-252W.

nostic artifacts to assist in dating the event. The most likely date is during the 1930s when the construction of the Fort Museum, now the V.O.C., resulted in major alterations to the landscape. Three fills were deposited at this time and were eventually capped by another sod surface.

PHASE V: POST 1930S FILLING EVENTS

Two additional landscaping activities have all but masked the ditch depression. One consists of a multiple filling episode involving the deposition of six clay fills. Eventually, they were sealed by a discontinuous buried sod line. The most recent filling event also consists of multiple deposits having an accumulated thickness of 40 cm. A buried pathway, composed of stone dust, lies between these fill layers and the present 'A' Horizon.

CONCLUSIONS

The investigations at Fort Malden were most successful in that they enabled us to finally locate the northern trace of the 1799 forticatations. They also provided information on their condition, extent, and manner of their construction. The excavations helped to confirm Gother Mann's 1799 proposal for the bastion construction as an actual as-built. This will assist us in developing future research strategies, management practices and most importantly, interpretive messages for the site. These findings are also of utility for future planning at Fort George and Fort St. Joseph where bastions were similarly designed.

FORT MISSISSAUGA NATIONAL HISTORIC SITE MILLENNIUM PATHWAY PROJECT

Investigations at Fort Mississauga were in support of the Friends of Fort George Millennium Project submission to provide a pathway and interpretive nodes for the visiting public. Presently, access to this National Historic Site can be a daunting experience since one must navigate, unguided, across an active golf course. We hope that the installation of a pathway will prove of benefit by offering a safe corridor to visit the site. The addition of outdoor exhibits will also enhance the visitor's appreciation and understanding of Fort Mississauga, for currently no Park Interpretive personnel are stationed there.

The investigations occurred in two phases. The first involved a three-person crew during the month of August. A crew of two undertook the second in October. The initial field research focused on examining impacts to cultural resources related to the enceinte of the fort. In particular, we wanted to determine the extent of the Macadamized parade surface uncovered in previous excavations (Last 1998, Mills 1999). The mitigation of the interpretive panels would also provide an opportunity to document the formation processes involved in the construction of the gorge of the ravelin, the terreplein overlooking Old Fort Niagara, and the exterior entrance to the sally port. The late autumn investigations involved mitigating the installation of the 279 m-long pathway. We hoped that this would provide information about resources pertaining to the Camp Niagara occupation on the glacis (Figure 9).

HISTORY OF FORT MISSISSAUGA

As discussed in previous reports (Last 1998, Mills 1999), the construction of Fort Mississauga was a direct result of the failure of Fort George during the War of 1812. Wanting to neutralize the effects of Old Fort Niagara and a threat of another American invasion, Lieutenant-Colonel Bruyères recommended that Mississauga Point be developed into a defensive stronghold (Flemming 1982). Designed as a star-shaped work, it boasted a brick tower, unique in Canada, and somewhat of a hybrid between a Martello tower and a Napoleonic tour modèle (Hughes 1991). By the time of the Rebellion, three soldiers' barracks, an officers' quarters, cookhouse, engineers' stores, and artillery stores occupied the parade. A protective ravelin, constructed in 1838, as well as a canteen, lay outside the fort and to the west of its entrance. Enclosed within the earthworks were two bombproof brick powder magazines. A sally port to the shoreline, originally constructed of wood, was later rebuilt in brick during the 1840s (Flemming 1982).

Fort Mississauga was abandoned in the 1860s and eventually transferred to the Department of Militia. In 1877, a nine-hole golf course was laid out on the Mississauga Commons. A second was re-established in 1905. By 1912, it had become the primary course in Niagara-on-the-Lake. Over the years, it has negotiated long-term leases with a succession of government departments and commissions. Today, the Niagara Golf Club still uses the area about the fort and has the distinc-

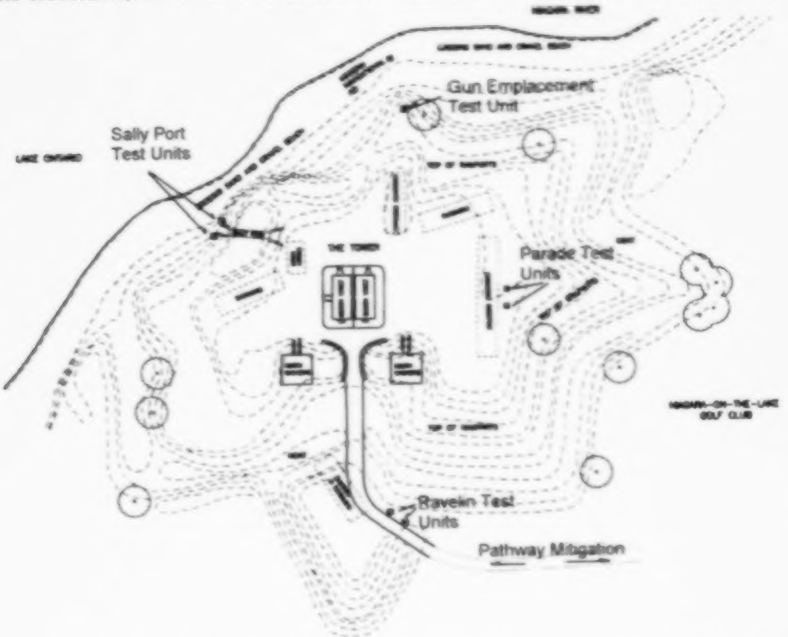

FIGURE 9. Plan of Fort Mississauga showing areas of excavation. Parks Canada, Ontario Service Centre (Cornwall).

tion of being the oldest existing course in North America (golf course listings n.d.).

PROJECT FINDINGS

THE 1838 RAVELIN

Two test units examined the southern edge of the ravelin gorge. They revealed a uniform stratigraphy throughout consisting of seven discrete layers. A buried 'A' Horizon, encountered at a depth of approximately 0.30 m below surface, dates to the 19th century. Beneath it is a pebble deposit dating to the 1840s. Although interpreted as a walking surface, its loose compaction suggests that it was a rarely used thoroughfare. Below the path lie historic clay fills. Possibly, they are derived from the excavation of the defensive ditch surrounding the ravelin.

Capping the buried sod are two successive occupation layers. They contained 15 spent 303 bullets. All were of W.W. I vintage. Since we found the bullets, rather than their casings, we suspect that the ravelin and ramparts temporarily functioned as an ad hoc backstop or target butt. As was expected, the recent sod contained many items associated with golfing. Broken plastic tees (used in the 1960s, but now substituted by the more environmentally friendly wooden tee) were found in abundance. Many golfers informed us that female club members once used this area as a tee-off. The many broken tees found within the units appear to confirm this.

THE 1814 PARADE

Two test units, located south of the southern soldiers' barracks revealed a stratigraphic sequence similar to past investigations. The excavation confirmed that a Macadamized parade surface was broadcast throughout the entire enceinte of the fort at a depth of 17cm below surface. Pavements of this type were common to 19th century military sites. Developed by John Loudon McAdam, a Scottish engineer and Road Trustee, his "macadamised" surface was adopted by Royal Engineers throughout the British Empire. Generally, his system employed angular rock spall, measuring 5 cm or less, rolled into a clay substrate. At Fort Mississauga, small water-worn stone rather than angular spalls were used, perhaps because of easy access to beach cobble.

Of note is the fact that the parade surface lies directly upon the natural 'C' Horizon clay. This is consistent with our findings from 1998/99 and confirms historical documentation on the manner of the earthwork construction (McConnell 1977). Normally, the height of the ramparts equals the depth of the ditch since the source of fill primarily comes from the ditch excavation. However, at Fort Mississauga the British fashioned the earthworks without the aid of a defensive ditch. Instead, they mined the interior of the fort as the required source for the rampart fills.

THE 1814 TERREPLEIN

In preparation for exhibit installation, we opened a test unit on the terreplein of the east curtain wall overlooking Lake Ontario and the Niagara River. At a depth of 20 cm below surface, excavations unearthed a portion of a gun platform in the form of the remains of a sleeper and several fragments of severely degraded platform planking (Figure 10). The sleeper is the best preserved and now measures 24 cm wide by 14 cm high. Its length is presently unknown since the sleeper continues beyond the limits of the test excavation. Historically, the platform would have supported a 24-pounder on a traversing carriage firing en barbette. Since time constraints did not allow for an intensive examination of the platform, it was decided not to install an interpretive panel until the full extent of the platform and associated features are better understood.

THE 1840S SALLY PORT

The Millennium Pathway project included a proposal to install a viewing platform by the

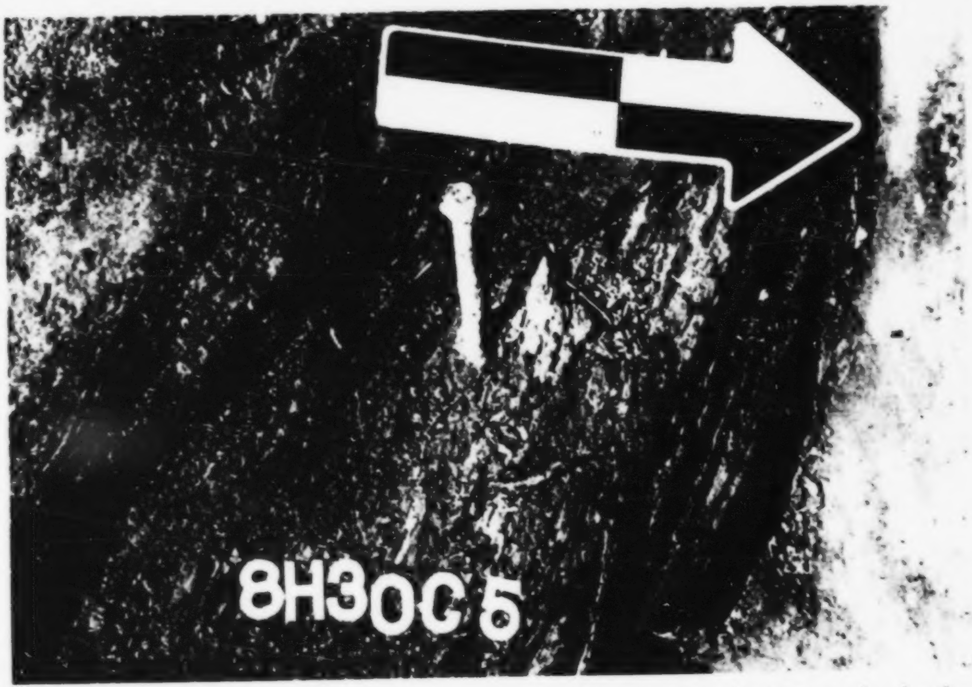

FIGURE 10. View of gun platform sleeper support with in situ wrought iron rose-head spike. Photo by V. Sheehan. Parks Canada, Ontario Service Centre (Cornwall). Photo no. 8H-73W.

sally port entrance. In order to assess the impact of its construction, we opened two units beside the wing walls of the feature. Both units measured 1.75 m by 1.0 m and were hand excavated to sterile soils. The investigations exposed successive fills that now make up the present scarp face of the rampart. The base of the wing walls, including their modified footings, was also revealed. Three repair activities, dating to 1998, 1980 and 1915, have affected the localized historic deposits along the scarp face of the rampart and have produced all but two of the deposits encountered during this excavation.

PHASE I: THE ORIGINAL EARTHWORKS (1814-1838)

The oldest deposit unearthed is the natural 'C' Horizon clay. Upon it, the ramparts were formed. No evidence of a buried 'B' or 'A' Horizon was observed indicating that Lieutenant-Colonel Bruyères had both scraped away prior to the creation of the eastern earthworks. This is consistent with other areas of the parade where the enceinte of the fort was lowered by the removal of the original overburden and the upper elevations of the 'C' Horizon.

Above the 'C' Horizon lay a 15 cm-thick deposit of heavy, friable clay. It represents the only historic rampart fill found during the excavation. While it contained fragments of mortar, no artifacts were recovered from this layer.

PHASE II: 1915 REPAIRS TO THE SOUTH WING WALL

The earliest repairs to the sally port wing walls appear to date to 1915. Similar to the repairs of the entranceway and powder magazine wing walls, a poured concrete footing now supports the wall. The footing trench was irregularly cut then backfilled with two clay fills. The lowest was composed of a heavy clay and contained numerous broken brick bats as well as several whole bricks used as an anti-splash for a drain incorporated into the base of the wing wall (Figure 11). The uppermost fill layer was also composed of clay. It contained several 20th century items including wire nails, tin foil, and a wooden tee. A 30 cm-thick deposit of heavy, friable clay covers the upper surface of the concrete footing. Since it overlies the footing but underlies the plastic sheet associated with the 1980 repairs, the fill deposit is presumed to be contemporaneous with the earlier, 1915 repair.

PHASE III: 1980 REPAIRS TO THE SOUTH WING WALL

A layer of thick black polyurethane plastic separates the 1980 repairs from those dating to 1915. Above the plastic lay six fill deposits of varying thickness. Most contain a matrix of very coarse red sand. Capping the fills is a buried 'A' Horizon. This sod covered most of the unit except for an area immediately about the footing wall. There, it has been cut by the 1998 repairs to the feature.

1998 REPAIRS TO THE SOUTH WING WALL

Recent repairs to the wing wall occurred in 1998. This activity had minimal effect for it only disturbs the rampart sod and a portion of

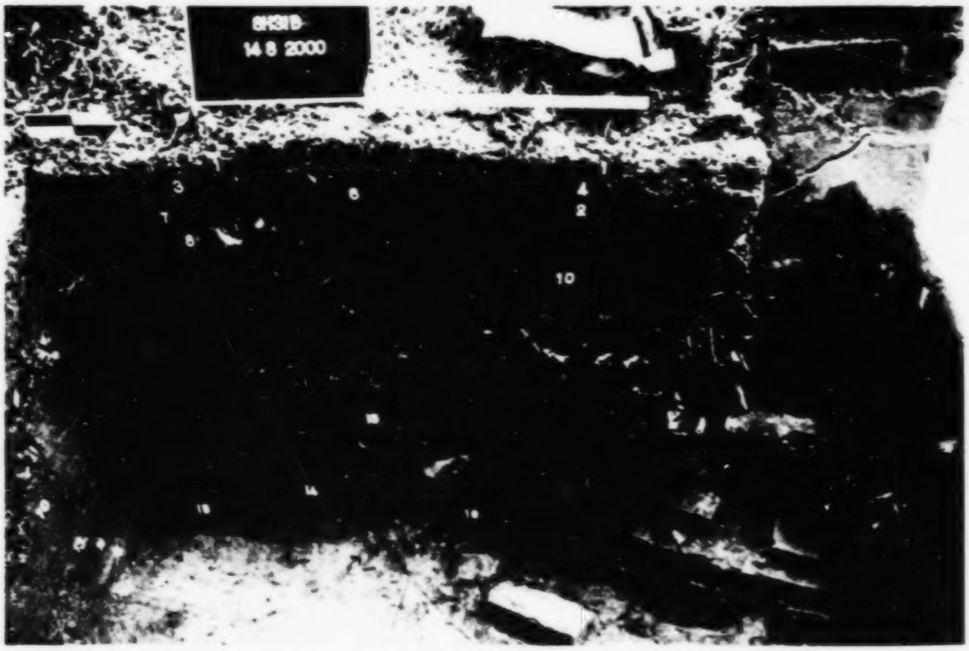

FIGURE 11. View of south sally port wing wall showing 1915 repairs to wall and integrated drain. Photo by J. Last. Canada, Ontario Service Centre (Cornwall). Photo no. 8H-103W.

the underlying 1980 repair fill. After the exterior south face of the wing wall was parged, a series of fills were deposited over the scarp face of the ramparts. The recent "A" Horizon now covers the face of the rampart.

MONITORING THE PATHWAY

Initially, the monitoring of the pathway could have been a daunting task for scheduling and personnel were both at a premium. Luckily, design changes, which raised the final elevations of the pathway, made it possible to employ a mechanized sod stripper rather than employing a backhoe to excavate the route. This greatly reduced potential impact to the resource and thus minimized the need for intervention. After laying out the 279 m-long route and baseline control, we monitored the sod stripping. The cutter removed approximately 4 cm of sod resulting in no noticeable disturbance to the resource. The cutting went amazingly well. By the end of the day the entire route had been cut (Figure 12).

In order to augment the survey and to gain a better appreciation of the stratigraphic sequence, we used a putting green hole cutter as a portable auger. This provided us with 12 cm-diameter core samples, which we took at every 10 m along the pathway. In the southern portion of the corridor, we encountered heavily compacted clay just below the present sod. This layer was recently deposited during the construction of the berm encircling the practice green and spans a distance of 37 m. The cutter also uncovered a thin deposit of clinker incorporated into a clay matrix. It represents the surface topping of a beaten path used by golfers and course personnel.

Along the central portion of the pathway, the sod cutting activity had no adverse affects on the

FIGURE 12. View of sod cutting for the Millennium pathway. Photo by J. Last. Parks Canada, Ontario Service Centre (Cornwall). Photo no. 8H-121W.

resource. The upper strata contain both the 'A' Horizon and an occupation layer. Investigation revealed neither historic features nor artifact concentrations. However, a trench running along the centre of this segment of the pathway was detected. We eventually identified it as an old waterline associated with the abandoned drinking fountains.

The most northern portion of the trail ran along the west glacis of the fort and into the ravelin entrance. Here, we opened four test units. The northernmost two encountered a roadbed approximately 8 cm below grade. Consisting of water-worn stone and pebbles, it ran from the Kiely Inn northeast on a diagonal across the golf course to the fort entrance. Amazingly, the roadbed is rich with artifacts, including a large accumulation of bone. Their size and concentration suggest that they might be part of a post abandonment deposition since they do not appear to be crushed. As such, the deposit has high research potential and should be investigated further if ever threatened by development.

CONCLUSIONS

Reviewing the entire route, it is safe to say that the installation of the pathway had little impact on historic resources at Fort Mississauga. To a great degree, this is the result of having the pathway raised and its edges feathered to meet the surrounding terrain. In regards to furthering our understanding of Fort Mississauga, the project provided an opportunity to examine several features within the fort. We now know that the Macademized parade surface extends over most of the fort enceinte, the position of one of the gun emplacements, and that the sally port received repairs similar to the entranceway and powder magazines. Importantly, the pathway installation will provide the visiting public with a safer and more informative site experience.

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FIELD SEASON SUMMARIES, NATIONAL PARKS AND NATIVE SITES, PARKS CANADA, ONTARIO SERVICE CENTRE: 2000

BRIAN D. ROSS

MIDDLE ISLAND (132H), POINT PELEE NATIONAL PARK OF CANADA: ARCHAEOLOGICAL RECONNAISSANCE

In 2000, Middle Island was acquired for Parks Canada and placed under the administration of Point Pelee National Park. The nearly 21-hectare island is so named because it is situated mid-way between Pelee Island, Ontario, to the north and Kellys Island, Ohio, to the south (Figure 1). The island had only been archaeologically inspected twice before — a brief, one-day inspection in 1982 and several days of survey and testing in 1983 — by the Regional Archaeologist for the province of Ontario (Fox 1984). The province's work discovered seven pre-Contact Aboriginal sites, dating from the Late Archaic to the Middle Woodland Periods (ca. 500 BC to AD 800-1200). The 1983 project also noted the presence of late 19th century debris distributed over much of the island in apparent plough zone deposits that would suggest early Euro-Canadian agricultural activity on the island. The presence of the ruins of a 19th century lighthouse and midden were also noted. Other known historic remains on the island include a ca. 1935 "bootleg clubhouse", icehouse, shed, boathouse, and fishermen's cabin (Rennie 1982). Other resources of historic value include two airstrips, iron stakes embedded in the rocky shore, middens, barge remains, and old machinery.

The National Parks and Native Sites archaeologists from the Ontario Service Centre (OSC) were given a one-day opportunity to inspect the known cultural resources currently found on the island. On the whole, all but one of the sites first discovered in 1983 were relocated (and this one — the Limestone site — was simply overlooked due to the lack of time). A new Aboriginal site, consisting of a small scattering of chert flakes and nodules, was also discovered to the southeast of the historic Clubhouse. Although Archaic Period material may be present on the island, most of the Aboriginal sites on Middle Island appear to be associated with the Late Woodland Western Basin Tradition, with the Younge Phase (ca. 1150 - 750 BP) predominating.

It has been hypothesized that the islands between the tip of Point Pelee and Sandusky Bay would have afforded a natural and relatively safe canoe route across Lake Erie. Indeed, evidence of Aboriginal occupations has been found on Pelee, Middle, and Kelley's islands. The findings from Middle Island suggest a series of short-term, sparsely occupied Aboriginal

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Parks Canada Agency
Ontario Service Centre
111 Water St. E.,
Cornwall, ON K6H 6S3

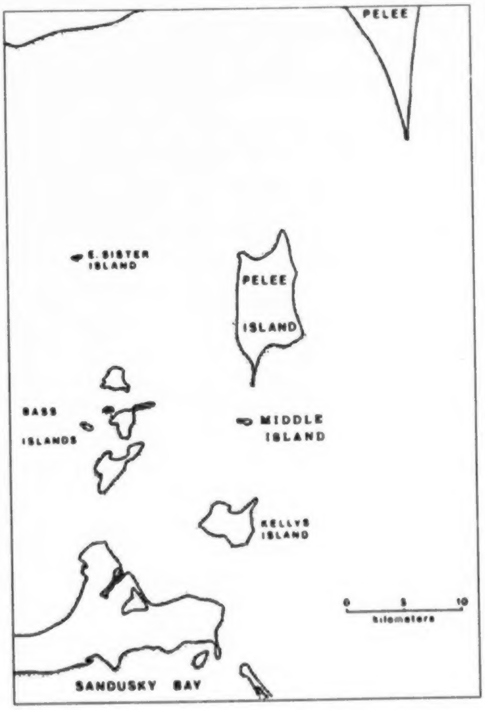

FIGURE 1. Location of Middle Island (from Fox 1984).

camps or resource exploitation sites. Fishing would appear to be the primary subsistence activity, supplemented by small game procurement and the harvesting of nuts, berries and eggs from the extensive nesting bird colonies on the island. There is evidence to suggest that at least one site (the Sulston site) was re-occupied over a period of several centuries. As first noted by Fox (1984: 9), the archaeological evidence emphasizes the maritime aspect of the Western Basin Tradition settlement pattern, in contrast to that of other, contemporary Ontario Iroquoian groups to the east. Furthermore, there is evidence to suggest that the cultural development on Middle Island beyond the Younge Phase more closely resembles that of adjacent Ohio than that of Point Pelee and southwestern Ontario.

In regards to the Historic Period, the island contains equally fascinating and important cultural resources. As has been noted, there is evidence of late 19th - 20th century agriculture and commercial fishing on the island. The remains of the 19th century lighthouse are also important. However, it is the 20th century Prohibition Era resources that are of particular interest and value. These resources are unique to the Parks Canada system. Each component of this occupation — the main house (Figure 2), the generator shed, the Caretaker's cottage, the airstrips, etc. — has intrinsic value, but it is as a unified complex that the Middle Island Clubhouse takes on its true significance.

Our reconnaissance revealed that between three to five Aboriginal sites had suffered from some form of shoreline erosion (likely resulting from severe winter storms). Three of these sites — Riddell, Moss, and Melissa — appear still to be under threat of continuing damage. Meanwhile, the Historic resources are showing signs of degradation from informal site visitation and illicit artifact collection. Efforts are currently underway to establish a regular programme of site monitoring to track and assess the nature and rate of resource loss and to determine mitigative options that would be required to best preserve the archaeological material on Middle Island.

HEALEY FALLS, TRENT-SEVERN WATERWAY: ARCHAEOLOGICAL MITIGATION (45H19, 21 AND 22)

The 2000 season of archaeological mitigation at the Healey Falls site, Trent-Severn Waterway, ran over a four-week period. A core crew of five people was able to excavate 86 square meters of the threatened site. This year, the mitigation work concentrated on the site's east end, in an area located along the edge of the main erosional gully that is being carved from the Trent River to the low marshy area to the southwest (Figure 3). This area had been

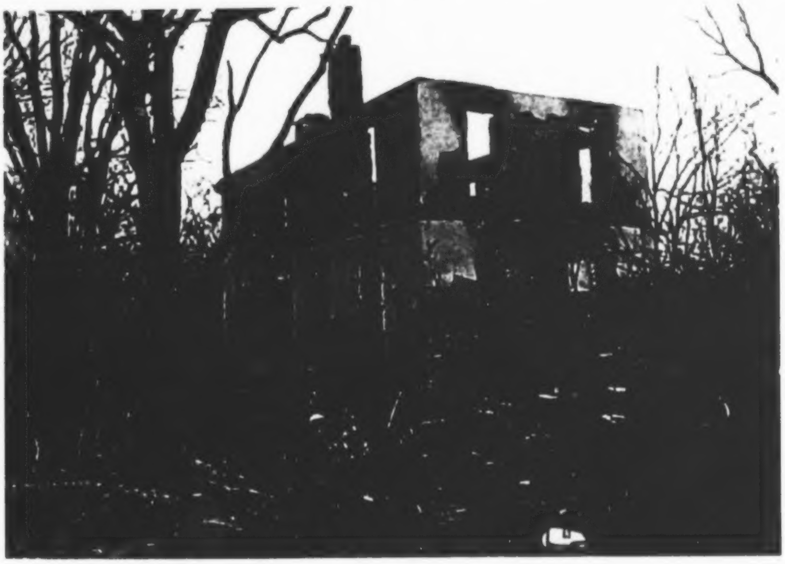

FIGURE 2. The Clubhouse ruins on Middle Island.

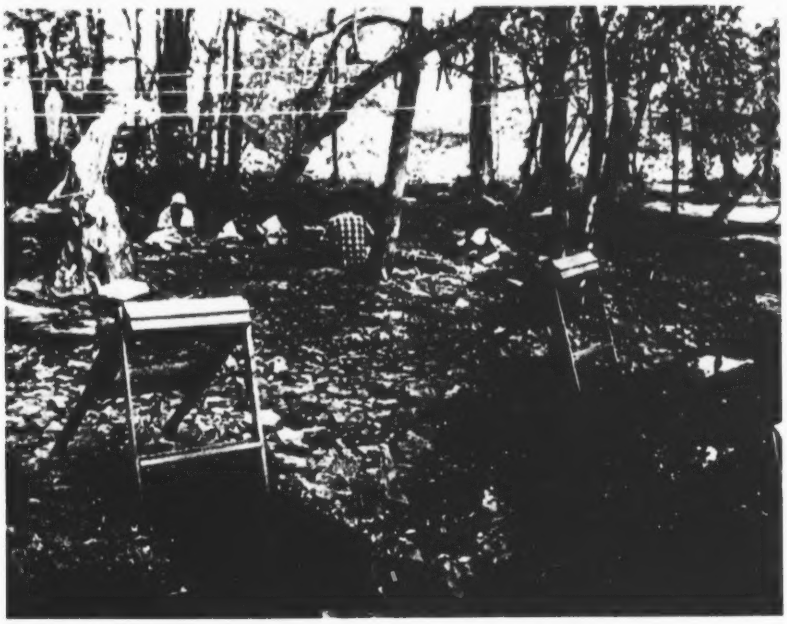

FIGURE 3. Area of investigation at Healey Falls, 2000.

relatively unexplored, although it has always been noted for the quantity of Native ceramics that have been collected from its surface. This observation was borne out through this year's excavations. Virtually every sub-operation here produced ceramic finds and a few proved to be surprisingly rich, including more Early Woodland Vinette 1 Ware.

The study area, though, was generally found to be very much on the periphery of the main site proper at Healey Falls. Artifact counts were way down this year. For example, this year produced a total of 85 "special finds" in contrast to the 122 such finds in 1999 or the 201 finds from 1998. Nevertheless, a few significant finds were made this year including a ground slate point fragment, a plummet, a ground stone pendant, a gorget fragment, two etched stones, a bone harpoon barb, and a bone needle.

Healey Falls has proven to be a significant cache of ground stone projectile points. Since the inception of archaeological mitigation measures here, over two dozen ground stone points and point preforms have been found on site. The ground slate point fragment from 2000 consists of part of a stem and barb. Stemmed ground stone points are a typical diagnostic trait of the Laurentian phase of the Middle Archaic (Ellis et al. 1990: 85). It is likely that the examples collected from Healey Falls are from this period.

The plummet has been manufactured from a small, water-worn metamorphic cobble. A single groove has been ground around its circumference at one end for the attachment of a cord. Plummets are often interpreted as weights for fishing activities, similar to net-sinkers, but some have suggested their use as bolas in hunting waterfowl (Ellis et al. 1990: 86). While the plummet from Healey Falls is a classic example of an elongated type from the Middle Archaic Period, it is thought that these artifacts are actually uncommon in Ontario (Wright 1960: 137-138).

The pendant, made of chlorite schist, is teardrop shaped and has two side-notches at its top or narrow end — presumably for attaching a cord. This feature is unusual compared to other pendants from Ontario, which typically have a single drilled hole for tying (see for example Ritchie 1980: 249-250, Plate 84, and Spence et al. 1990: 154, Plate 5.9a). The Healey Falls example may alternatively be a variant form of net-sinker (although it seems too small for such a purpose) or plummet. It is difficult to determine a date for this unusual artifact.

The gorget is made from a roughly rectangular slab of phyllite. Its edges and both surfaces remain unworked with the exception of a single drilled hole near the edge of one side. Gorgets typically have two or more holes (Ritchie 1980: 249), thus the Healey Falls example may alternatively be another pendant. However, the asymmetrical placement of the hole and the rough edges suggest that it is likely a fragment of a gorget preform. The general outline of the specimen is comparable to forms from the Early Woodland Meadowood complex (see Spence et. al. 1990:130, Figure 5.2; Wright 1972: Colour Plate III).

Two fragments of engraved stones were recovered (Figure 4). Although at a cursory glance these stones bear some resemblance to grinding stones, they are indeed distinct because there are striations or incised lines on their surfaces that form patterns or designs. One fragment is of a smooth, flat argillaceous/slate stone and the other specimen is of sandstone. The etched pattern on both stones is similar, consisting of a series of vertical lines next to radiating oblique lines. The etchings appear to be purposefully applied. The only comparative material discovered in the archaeological literature for Ontario comes from the Surma site, a late Middle Woodland to early Late Woodland burial site in Fort Erie (Emerson and Noble 1966). Decorations on two engraved objects from the Surma site have been interpreted as simplistic renderings of feathers, an animal's spinal column or rib cage,

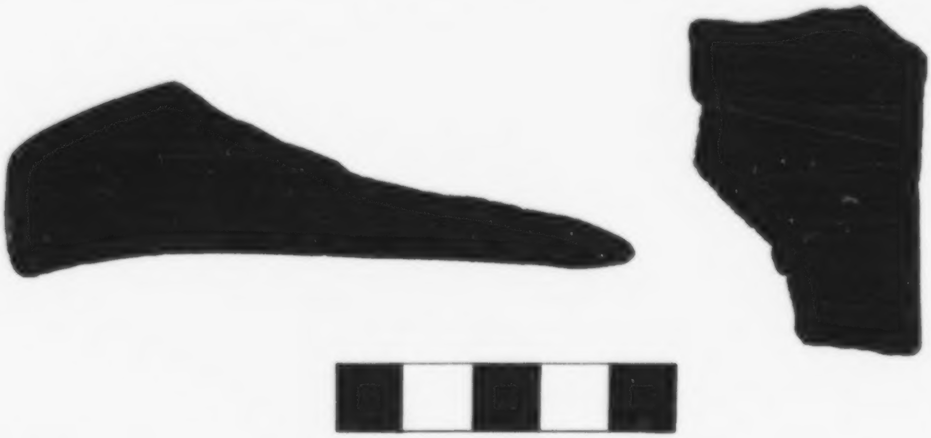

Figure 4. Two engraved stones from Healey Falls, Trent-Severn Waterway, 2000.

or alternatively speculated to be stylized depictions of the "World Tree" growing at the "Cosmic Axis" (Williamson and MacDonald 1998:130-131). At this time, it is impossible to say what the Healey Falls engravings depict, but it is possible that the artifacts themselves are fragments of gorgets, pendants or memorial plaques.

The Healey Falls site continues to amaze. Even after eighty years of erosion and five seasons of archaeological mitigation, the site continues to yield evidence that illustrates its importance to the study and understanding of archaeology in Eastern Ontario. Extensive seasonal flooding, though, continues to threaten the cultural resources at Healey Falls, and as a consequence, continued archaeological mitigation is required in those areas most affected.

MAIN DUCK ISLAND (133H), ST. LAWRENCE ISLANDS NATIONAL PARK: ARCHAEOLOGICAL RECONNAISSANCE

With the transfer of administrative responsibility for Yorkshire and Main Duck Islands from the Rideau Canal to St. Lawrence Islands National Park, a preliminary archaeological assessment was undertaken on Main Duck Island in 2000. Due to time constraints, no attempt was made to visit Yorkshire Island and the investigations on Main Duck were limited to a shoreline walkover survey, surface collection and the visual evaluation of specific extant historic features. As such, the discovery, inspection and assessment of the archaeological resources were, by necessity, cursory and must be considered incomplete.

Main Duck and Yorkshire Islands are located at the eastern end of Lake Ontario, on the Canadian side of the International Border (Figure 5). At approximately 500 acres, Main Duck is the largest island within a group of islands called "the Ducks". Beside Main Duck, this group of islands is composed of Yorkshire, False Ducks, and Timber Islands. Yorkshire Island, at about 36 acres, is the closest to Main Duck, located just off its easternmost tip. On the United States side of the border, neighbouring islands include Galloo and Stony. Together, these islands form an archipelago extending from Long Point in Ontario to Stony Point in New York.

Eight archaeological sites were identified on Main Duck Island during the 2000 survey. Five

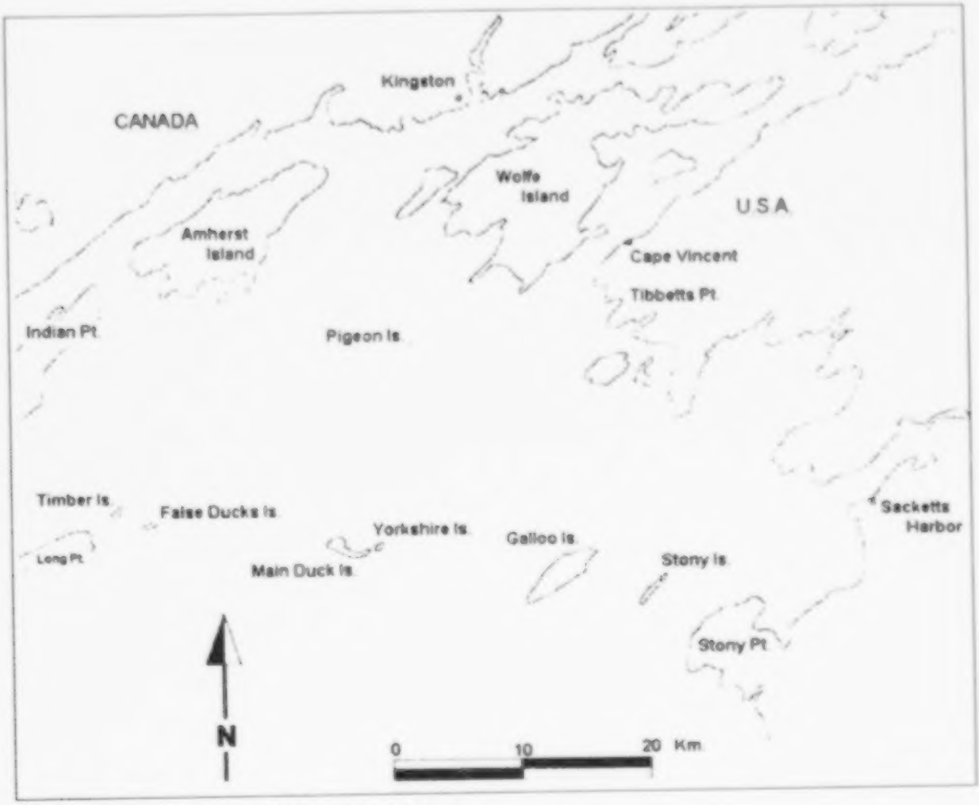
Kingston
CANADA
Wolfe Island
U.S.A
Amherst Island
Cape Vincent
Tibbetts Pt
Indian Pt
Pigeon Is
Timber Is
False Ducks Is
Yorkshire Is
Galloo Is
Stony Is
Sacketts Harbor
Long Pt
Main Duck Is
Stony Pt
N
0
10
20 Km

FIGURE 5. Location of Main Duck Island.

of these sites date to the Historic Period, while the remaining three are pre-Contact Aboriginal sites.

The largest historic site on the island, Village Cove, relates specifically to the commercial fishing village that was founded on the island during the mid- to late-19th century. This village, as first described in 1871 (Osbourne 1981), consisted of a decrepit log house, a stable, an icehouse, and shanties for a population of about 12 people, 100 sheep, 35 cows, five swine, and four horses. By its heyday, in the early 20th century, the village had grown to a seasonal population of 50-60 individuals and consisted mainly of 2-room shanties, an icehouse, a storehouse, several barns, and cement tanks for cleaning nets. At present, the village site (Figure 6) consists of three extant buildings and two ruins, including an extant barn/net shed, an old privy, the foundations of an icehouse, an extant annex off of the icehouse, and a masonry store house. A few scattered fragments of 19th and early 20th century artifacts can be found on the exposed ground surfaces throughout the village site. Other features, like dock/wharf cribbing, associated with the fishery and the village, can be found in the water off the shore.

Other historic resources on the island are attributed to John Foster Dulles, U.S. Secretary of State during World War II. When, in the 1940's, the fishing industry came to an end and

FIGURE 6. The net shed (left) and masonry store-house (right) at Village Cove, Main Duck Island.

the last residents of the village left, Dulles acquired the island and began to demolish the old properties in an attempt to transform the island into his personal refuge and sanctuary. All that remains of his simple log cabin is a solitary stone and brick chimney. A small, shake clad, frame cabin, at the entrance to Fisherman's (i.e., Village) Cove, likely belonged to Mr. R. F. Hart, who acted as Dulles' agent in managing the island and maintaining the fishery. Following Dulles' death, Hart acquired the island and was responsible for ensuring that it remains in the Canadian public domain and continues as a nature preserve. Immediately to the southwest of the cottage, stands the concrete foundation of a large barn. There are also the submerged remains of a huge wharf just off shore from the cottage, in the cove. These resources likely would have been originally associated with the commercial fishery.

A complex of lighthouse structures is located at the extreme western tip of the island. The still operating lighthouse, which is owned and maintained by the Canadian Coast Guard, was constructed in 1913-1914. An enormous cement-lined basin was constructed to the east of the lighthouse, apparently to provide safe harbour for boats servicing the station. The "new" Light Keeper's House is a common bungalow that appears to date from the 1960's. This property includes a walled boat ramp, well, concrete slab patio, and a concrete retaining wall. The "old" Light Keeper's House is situated farther to the northeast. It appears to be of the same vintage as the Lighthouse and was originally designed as a side-by-side duplex for two families. Two wells and a well preserved, stone, viewing platform, overlooking the lake, with flanking steps down to the beach, are associated with this building. The remains of wooden utility poles suggest that both houses were hooked up to the Lighthouse for electricity. A narrow cement walk links all three buildings.

Mid-19th century Historic material was found eroding out of the duff at Schoolhouse Bay, the first large bay to the northwest of Village Cove. Much of the material recovered was architectural in nature, indicating the presence of a non-extant structure in the vicinity. Ceramic sherds from a plate and bowl, along with a spoon, suggest some form of domestic activity at this site. This interpretation is supported by other personal and food related artifacts. The discovery of a large needle may also indicate sail or net working or repairing on site.

The first evidence of an Aboriginal presence on the island, dating to the pre-European contact period, was found at Chimney Bay, adjacent to Dulles Bluff. The diagnostic ceramics suggest that this site was affiliated with Middle Iroquoian peoples, possibly of the Middleport sub-stage, and dates to approximately 600 - 700 BP. The recovery of pottery, waste lithic material and faunal remains indicate that this was an encampment and that stone tools were manufactured here, utilizing exotic lithic material imported to the island.

A second pre-Contact Aboriginal site was also found on Chimney Bay. As with the previous site, Chimney Bay II produced Late Woodland pottery and chert flakes. The diagnostic pottery indicates that the site was occupied at least twice by two temporally distinct groups: first by the early Owasco (c. 900 - 1100 BP) and then by late pre-Contact Iroquois (c. 500 - 600 BP). Again, there is evidence that stone tools were being manufactured on site.

A third pre-Contact Aboriginal site was discovered at Schoolhouse Point. The diagnostic ceramics indicate that Point Peninsula peoples occupied this site, c. 1500 - 2400 BP. This material is considerably older than the Iroquoian material found at the Chimney Bay sites.

During the 19th and 20th centuries, this archipelago was seen as an obstacle to marine traffic; but for pre-Contact Aboriginals, it likely served as a convenient transportation corridor between the two mainland shores. This year's investigations have now shown that this speculation is true. Also, while there has been a documented Historic presence on the island since the early 1800's, the overwhelming evidence of this occupation (i.e., the village, the Lighthouse complex, Hart's cottage and Dulles' cabin) dates to after the late 19th century. As such, the discovery of an earlier, pre-1860's Historic occupation on the island, at Schoolhouse Bay, holds great potential in illustrating the poorly known tenure of the island's early Euro-Canadian occupants. Meanwhile, the village on Main Duck (including the area around Hart's Cottage) has great resource and research potential representative of a late 19th or early 20th century fishing colony associated with the Great Lakes Commercial Fishery.

CAMP KITCHIKEWANA, GEORGIAN BAY ISLANDS NATIONAL PARK MESS HALL SALVAGE EXCAVATIONS (13H32)

Ever since 1989, when systematic surface collection of the exposed trails and activity areas began at the Midland YMCA's Camp Kitchikewana (a.k.a. "Camp Kitchi") on Beausoleil Island, Georgian Bay Islands National Park of Canada (Figure 7), the area immediately in front of the Camp's Mess Hall has sparked interest. Besides the regular presence of a wide variety of pre-Contact Aboriginal material, the area by the Hall's southeast door (i.e., the Treasure Lodge section) has consistently produced a high number of 19th century material. The area was also noted for the presence of cut stone blocks and degrading bricks extending from the Hall to the eroding edge of the shoreline. These initial discoveries and observations were confirmed during the controlled archaeological survey of the camp in 1995-96. It was speculated that the cultural remains by the Treasure Lodge indicated the presence of an historic cabin, likely associated with the Ojibway Reserve Village known to have existed on the site of the Camp during the mid-19th century.

Over a four-week period, a core crew of 5 people excavated 22 square metres of site located directly outside of the southeast Mess Hall doorway. An enormous pit feature, turned out to be part of the cellar beneath the 19th century

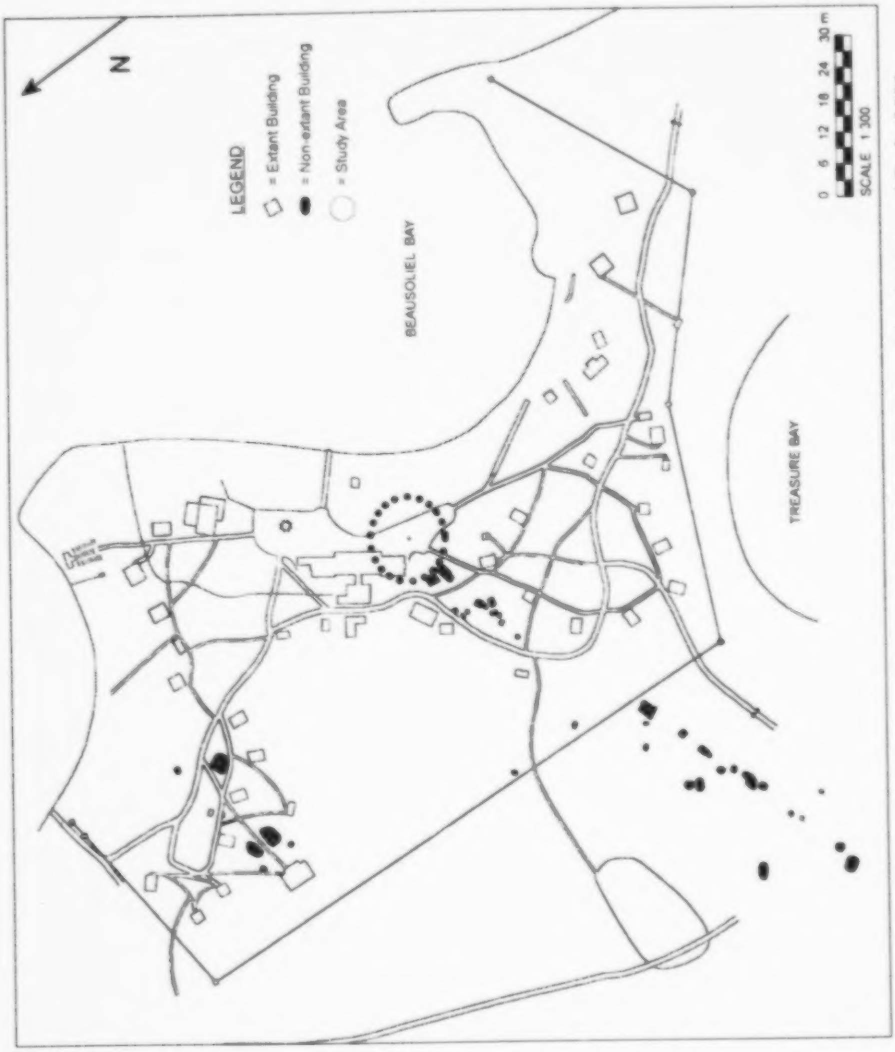
N
LEGEND
= Extant Building
= Non-extant Building
= Study Area
BEAUSOLIEL BAY
TREASURE BAY
0 6 12 18 24 30 m
SCALE 1:300

FIGURE 7. Study area by Camp Kitchi's Mess Hall, Georgian Bay Islands National Park, 2000.

cabin. Extending well beyond the limits of this year's excavations, this pit was quite deep and found to contain a virtually homogenous deposit of 19th century refuse and debris. The feature is capped by a thick lens of crumbled brick that covers a series of overlapping fill and demolition events, with no evidence of burning. Reconstructing these events suggests that after a period of abandonment, the cellar was filled in with old timbers, rubbish and cut granite blocks. It would appear that when the summer recreational camp was being developed in the early 20th century, the site was cleared and leveled by toppling what was left of the cabin's chimney and hearth into its cellar.

An amazingly thick deposit of burnt wood and ash was also discovered in a uniformly square feature. At depth, a concave basin of fused sand was encountered. It was found that copious amounts of calcined fish, duck and muskrat bones were sandwiched between layers of charred and burnt wood. It is believed that this feature is the remains of a smokehouse associated with the 19th century occupation. It is important to note that no Modern artifacts were found anywhere near this feature, making it the only intact feature of any substance directly associated with the Historic Ojibway Reserve occupation.

Most subsistence and social information on the 19th century Ojibway Village Period came from the cabin cellar and associated smokehouse. Food preparation, storage and consumption artifacts included an inordinately large assemblage of beverage service artifacts consisting of 11 cups, seven saucers, and a teapot. Jewelry and other personal ornamentation items were especially abundant, including a jingle cone that had been made from re-cut metal sheeting and a wound head straight pin reworked into an earring loop. Toys were also extremely well represented. Of particular interest is a significantly high proportion of effigy pipe bowls (18), all with human face motifs. A trade axe, a number of beads and a second reworked thimble present evidence for an earlier 18th century occupation of the site. The copper-alloy thimble had been re-worked into another jingle. However, the fact that these items were all found in the cabin cellar, and that there were so few of them, suggests that they may have been brought to, and eventually deposited onto, the site as heirlooms from this earlier period.

Again, most pertinent zooarchaeological information came from the cabin cellar and associated smokehouse. This material was analyzed by Deborah J. Berg, Archaeozoologist with the University of Toronto at Mississauga (Berg 2001). Of the 12,000 bones and bone fragments recovered and analyzed, 62% represent fish species and 16% exhibit heat alteration. The sample includes fish, duck, turtle, mollusk and a wide variety of mammal specimens, that likely indicate the diet of the site's inhabitants. Only five specimens showed signs of having been worked: a small piece of grooved mammal bone; a thin flat piece of bone that has been smoothed; a perforated, incised and tapered mammal rib (possibly a net needle); and two bird long bone shafts with the ends grooved and snapped off to fashion tubes (perhaps as blanks from which to make beads). Some of the ducks showed signs of butchering, as did the muskrats (7) white-tailed deer (2), river otter (2), snowshoe hares (2), fisher (1), and lynx (1). Some extremely large specimens of catfish (25) and drumfish (4) also showed signs of butchering or filleting. Not surprisingly, there seems to have been an emphasis on utilizing aquatic resources, especially fish and waterfowl (as well as turtles and molluscs) as a stable food resource. While domestic food resources were present (i.e., one cow, two pigs and a chicken), they do not appear to play a large role in the site's subsistence.

Beneath the historic occupation, a much earlier Pre-Contact occupation was discovered. There was very little evidence of reduction [domestic?] activity occurring in the area. The paucity of all-purpose utilized flakes (only 3), which are usually the most abundant tool type, implies specialized site activity. The presence of eight scrapers and a graver suggests that this activity may have been associated with the processing of food, hides, wood, or bone items. Especially noticeable is the low frequency of Huronia Pebble chert that is by far the most abundant chert type elsewhere at Camp Kitchi. There are five types of chert represented in the 2000 lithic assemblage (i.e., Kettle Point, Gordon Lake, Onondaga, Detour, and Upper Mercer) that are exotic varieties imported to the site from distant sources. Fragments from at least 10 Middle Woodland Period ceramic containers were recovered. Two vessels with "Juntenun" ware characteristics (one of which was recovered nearly complete) suggest that this area of the site was most actively occupied during the later stages of the Middle Woodland Period (c. 1350-550 BP; McPherron 1967). Only a few sherds of a plain ceramic vessel from the Late Woodland Period (c. 1150 - 300 BP) were recovered. The presence of ceramics also reinforces the notion that the activities in this area were primarily connected to the processing of foodstuff. A "ghost" feature of highly calcined bone fragments, likely from a roasting or rendering pit, was found. Similar features have been found during past archaeological investigations throughout the Camp.

All in all, the 2000 project at Camp Kitchi turned out quite differently than either of the other major excavation projects at the Camp — the 1990 Septic Bed dig and 1992-94 Volleyball Court digs (Ross 1994: 48-50, Ross 1995: 13-14, Ross & D'Annibale 1996: 21-23). These other projects produced predominantly exceptional pre-Contact material and information, whereas this year's work produced impressive evidence of the Historic 19th century inhabitation of Kitchi. Be that as it may, some important Native pieces were recovered this year, but again there is a difference. In the past, pre-Contact material was fairly evenly split between ceramic and lithic artifacts, but this year very few lithics (especially formal tools) were found. The impressive Native artifacts this field season were ceramics.

The on-going impact of the YMCA operations on the archaeological resources at Camp Kitchikewana has been shown to be profound. As such, the year 2000 became the first year of a multi-year programme to mitigate the threatened resources at the camp, beginning with this 19th century cabin.

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FORT GEORGE PALISADE INVESTIGATION, NIAGARA-ON-THE-LAKE, ONTARIO

PETER A. SATTELBERGER

INTRODUCTION

Ontario Service Centre (OSC) Archaeological Services undertook an investigation of the present palisade curtain at Fort George during October 2000. The main purpose of this study was to investigate the nature, location, and integrity of cultural resources associated with the fortifications of the 1796/1812 period. This project provided the first real opportunity to define and evaluate the original fort trace and its spatial relationship with the 1937 reconstructed site. It also furthered our understanding of the evolution of the fort and assisted in developing research designs and strategies for future research as well as mitigating repairs to the present bastions and curtain walls.

HISTORIC OVERVIEW

The construction of Fort George began in 1796 and was essentially completed by 1801 (Figure 1). Details of the original fortifications, however, remain illusive. Historic plans of the pre-war Fort George provide only a general, and at times conflicting, appearance of the fortifications. Moreover, it is not always possible to discriminate between what was proposed and what was actually constructed. Documentary sources from the period can be equally vague. One of the earliest, and probably more reliable descriptions of the pre-war fortifications appeared in a report submitted by Lt. Col. Bruyères of the Royal Engineers on August 1811, in which he referred to Fort George as:

> An irregular field work consisting of six small bastions, faced with framed timber and plank...connected with a line of picketing, twelve feet high. (Public Archives of Canada. 1811).

The extent to which the British modified fortifications at Fort George prior to the outbreak of war is also a controversial issue. Available documentary sources indicate improvements were carried out, but lack specific detail as to the nature and extent of these changes. Major General Sheaffe, commanding the Niagara region during this period, provided the following comments on the state of readiness at Fort George in correspondence with Col. Henry Proctor at Fort Malden as late as September 1812:

> We have been very busy in Fort George on the river side a curtain as high as the piket (sic) has been raised from the flat bastion to that on the right flank, on which are an eighteen and a twelve pounder on traveling platforms of the new construction - the bastion on the left flank of that side, in which provisions were stored, has been filled up to be converted into a cavalier on which one of your twen-

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Parks Canada Agency
Ontario Service Centre
111 Water St. E.,
Cornwall, ON K6H 6S3

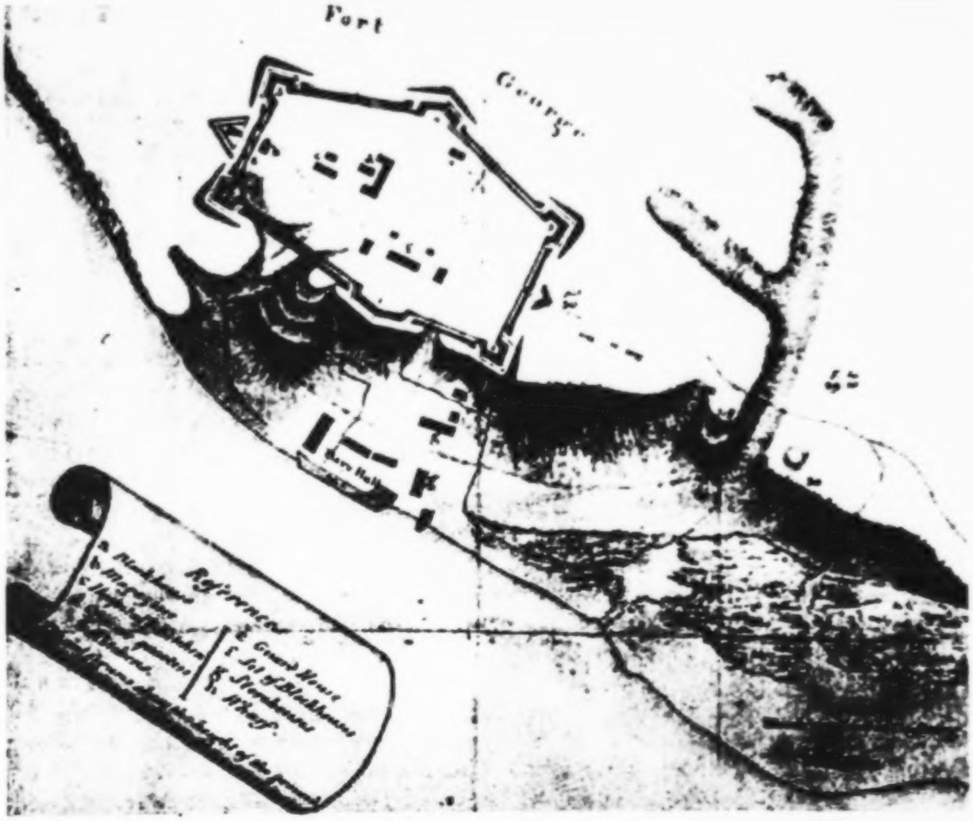

FIGURE 1: Detail of "Plan of Fort George Upper Canada showing the works of defence ordered to be constructed in 1799". By Gother Mann 1799. National Archives of Canada: Cartographic and Architectural Division, NMC Neg. no. 0043149.

> tyfours is to be mounted… (Coleman 1977:16)

Confirmation of Sheaffe's modifications was subsequently reported by Bruyères to Sir George Prevost on February 13, 1813, three months before the American capture of Fort George. In this same document, Bruyères also outlined his own sweeping recommendations for the conversion of Fort George into a much reduced, but more defensible fieldwork, although there is no evidence that the British acted on his advice.

Fort George was taken by an American amphibious assault, on May 26, 1813. Although intent on driving the British from the peninsula, the American invasion soon faltered a week later under a British counter attack at Stoney Creek. Thus, unable to secure their position the Americans fell back to Fort George where they found themselves virtual prisoners within their recent acquisition, hemmed in and harassed by British forces and their native allies. To secure their position at Fort George, it was essential for them to improve upon the defences abandoned by the

British and proceed with their own changes.

The American occupation of Fort George lasted seven months. When the British reoccupied the fort, they found it considerably altered from its pre-war appearance, reduced in size to a pentagonal earthwork extending over the northern half of its original configuration. The Americans had also added entrenchments extending from the northwest bastion into the town of Newark then eastward toward the Niagara River. With the exception of the stone powder magazine, nothing was left standing within the fort at the time of the British reoccupation.

British improvements at Fort George during the immediate post-war years included: the construction of new barracks, a brick powder magazine, and modifications to the recently reduced earthworks. The War of 1812 had clearly underscored the untenable position of Fort George. Its military significance was quickly superseded by nearby Fort Mississauga and Butler's Barracks, leading to its eventual abandonment by the late 1820s.

Throughout the remainder of the nineteenth century, a succession of tenants and caretakers occupied the fort, operating it for a time as a farm. Events during World War I briefly revived military interest in Fort George as part of Camp Niagara, a larger training area focussed on Butler's Barracks to the west. A frame field hospital, kitchen, and mess were constructed within the southern portion of the first fort interior during this period. Once the crisis of the Great War had passed, however, these buildings fell into neglect and were eventually abandoned.

The recognition and restoration of Fort George as a historic site began in the late 1930s. Depression era politics led to a series of make work projects including, among other things, the reconstruction of a variety of historic sites. The property was initially leased to the Niagara Parks Commission who levelled portions of the extant earthworks during the reconstruction of the pre-war fort based chiefly on a limited number of period plans available at the time. Parks Canada subsequently acquired the site in 1969, and continues to preserve and promote Fort George as a National Historic Site.

PREVIOUS ARCHAEOLOGICAL RESEARCH

Our current understanding of the original defences at Fort George is entirely derived from historical evidence. Under Parks Canada administration, archaeological research at Fort George has focused primarily upon study areas within the fort interior and surrounding environs. The nature of the original fortifications and their spatial relationship with the present reconstructed fort defences are questions that have plagued our understanding of the developmental sequence of the site. This current project therefore, marks the first premeditated archaeological investigation of the original fort trace.

The 1937 reconstructed palisade has been examined archaeologically on several occasions in recent decades to assess its physical condition. Two machine-excavated trenches were positioned against the palisade interior between the northeast and flag bastions for this purpose in the mid 1980s (Burke 1984, Last 1984). Similarly, two additional machine excavated trenches were carried out along the southeast curtain between the flag and southeast bastions (Christianson 1990). Excavation results in each case revealed at least two earlier sod surfaces, representing the 1937 surface at the commencement of reconstruction activities, and small segments of an earlier historic surface of indeterminate date associated with either the military or nineteenth century post-military occupation. No evidence of the first fort trace was retrieved during these various investigations.

THE 2000 PALISADE PROJECT

STUDY AREA

In attempting to fulfil the research design of this project, it was first necessary to select an excavation location along the existing palisade line that offered the best potential for the recovery of evidence of the original defences. A review of the structural history of Fort George and pre-reconstruction plans suggested the south palisade line was most appropriate. This area is situated outside of the reduced earthworks associated with the American and later British forts, where it is hoped to have remained relatively undisturbed until the commencement of the 1937 reconstruction. The selection was further narrowed to a position east of the berm, protecting the magazine gorge, and the southeast bastion, where the reshaping of the gorge during the reconstruction period is believed to have had less impact.

The removal of all evidence of the original curtain by the construction of the 1937 palisade and ditch was considered an unlikely event. The 1937 reconstructed trace was established on the ground through a combination of scaling from historic plans and extant surface features, which in the end resulted in compromises being struck in the final placement of fortification elements of the first period fort (Way 1973). This process suggested to us that even if the spatial alignment of the original and reconstructed traces were close, there existed good potential for the recovery of evidence of the former in relation to the latter.

METHODOLOGY

Given the extent of the proposed trenches and the resources and time available for this investigation, machine excavation was considered the most appropriate means to proceed. Three trenches were excavated in this manner, one on the interior of the palisade, 19H53A, and two on the exterior designated units 19H53B and 19H53C (Figure 2).

Once excavated, an extended profile was cleaned by hand to permit analysis of the stratigraphic sequence. All strata were recorded, drawn, and photographed. Small artifact assemblages were retrieved from each of these trenches; an unfortunate consequence of mechanical excavation, but a worthwhile compromise between the spatial evidence retrieved and the time and resources available.

RESULTS AND INTERPRETATIONS

The stratigraphic sequence within each of the trenches fall into three broad phases of site development. The first begins with natural or pre-1799 deposits. The second phase consists of the British and American military occupations as well as the tenant use of the site throughout the nineteenth century. Activities associated with the 1937 reconstruction and the modern occupation of the site constitute the third and last phase.

PHASE 1: NATURAL DEPOSITS

Both exterior trenches, 19H53B and 19H53C, were excavated to natural or 'C' Horizon deposits. For the most part, these were comprised of friable brown silty clays. Multiple horizontal striations, or veins, derived from fluvial deposition were evident within this material. The natural soils within 19H53B also contained rather curious isolated inclusions of

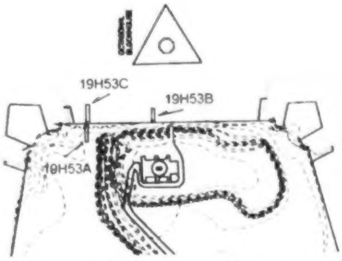

FIGURE 2: Plan showing location of excavation units.

coarse loose sand, fine powdery sand and hard plastic clay. Although their mode of deposition is not entirely clear, they can be safely attributed to the glacial marine environment that created them.

Excavation unit 19H53A provided the only undisturbed 'B' Horizon consisting of silty dark yellowish clay. This stratum formed the base of the entire trench where it was excavated to an average depth of 0.50 m. No artifacts were of course retrieved from these natural deposits.

PHASE 2: HISTORIC OCCUPATIONS

The earliest historic feature revealed during this study was a well demarcated sod line most evident within unit 19H53A (Figure 3). This sod averaged 0.05 m in thickness and extended throughout the entire trench at a depth ranging from 1.5 to 1.7 m below present grade. This was the surface the British military walked upon before and during the construction of Fort George beginning in 1796. It possessed a shallow slope to the north leading to the natural ravine that curled through this portion of the original trace enroute to the Niagara River. The western extent of this ravine was modified to form the gorge for the 1796 stone powder magazine, while the rest was left as a naturally rolling terrain. Archaeological investigations of a proposed garden plot south of Blockhouse no. 3 subsequently determined the eastern portion of this ravine was not entirely filled and levelled until the 1937 reconstruction (Sattelberger 1997). This same 1796 sod surface appeared as small truncated segments within the north end of unit 19H53C where it managed to have survived the impact of the 1937 reconstruction. This sod overlay the previously noted natural 'B' Horizon.

Results from unit 19H53A indicate a considerable amount of fill activity occurred within this area of the fort interior, likely during the military occupation of the site. A variety of fills had been applied over the previously noted 1796 sod surface to an average depth of 0.60 metres. Unfortunately, insufficient diagnostic material was retrieved from within these fills to ascribe them with any confidence to either the British or American forces. It seems unlikely, however, the Americans would have been responsible for these fill deposits, given their preoccupation with the northern half of the site during their seven-month occupation in 1813. Presumably, the British required an increased elevation within this area of the fort interior, either during its initial construction, or in association with prewar modifications of their defences. In so doing, they maintained the naturally sloping contour in this area toward the ravine in the north rather than any attempt to level it. It is unlikely the subsequent tenant occupation had any significant impact on this part of the site as their residence and farm operation was concentrated more to the north (Sattelberger 1997). These fills were sealed by a well-developed sod surface, which remained exposed until the commencement of the 1937 reconstruction.

A historic ditch feature was evident within trench 19H53B. The base of this ditch was approximately 1.1 m in width and possessed a rounded profile, not unlike that of the reconstructed ditch today. The scarp slope of this feature also shared the same angle of slope with the present ditch, the counterscarp, however, was sheared away by the 1937 modern ditch excavation (Figure 4).

The ditch contained a historic fill deposit that survived to a depth of 0.35 metres. Retrieved from this fill was a small assemblage of early nineteenth century artifacts along with charcoal and brick fragments. Partially sealing this deposit was a well-developed buried sod that outlined the scarp face contour of this feature. The relationship of these two events indicates the sod surface must be contemporary with the construction of the ditch presumably during the first fort period. This same sod evidently lay undisturbed until it was partially scraped away by 1937 reconstruction activities.

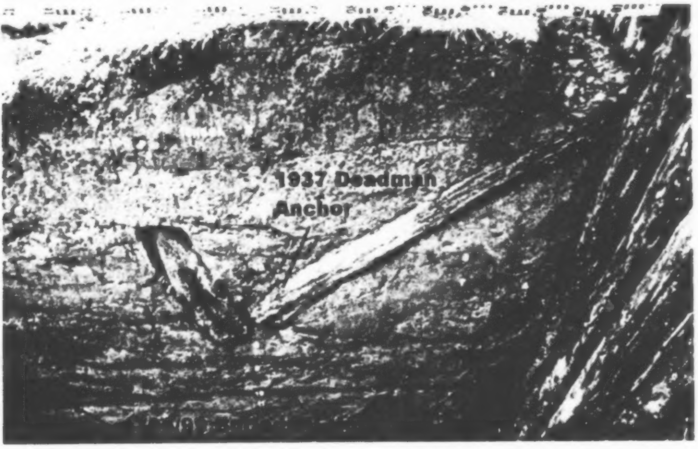

FIGURE 3: East profile of unit 19H53A showing intact remains of the 1796/99 buried 'A' Horizon. One of the structural braces or deadman used to anchor the present 1937 palisade is also evident. Photo by J. Last. Parks Canada, Ontario Service Centre (Cornwall). Photo no. 19H-44W.

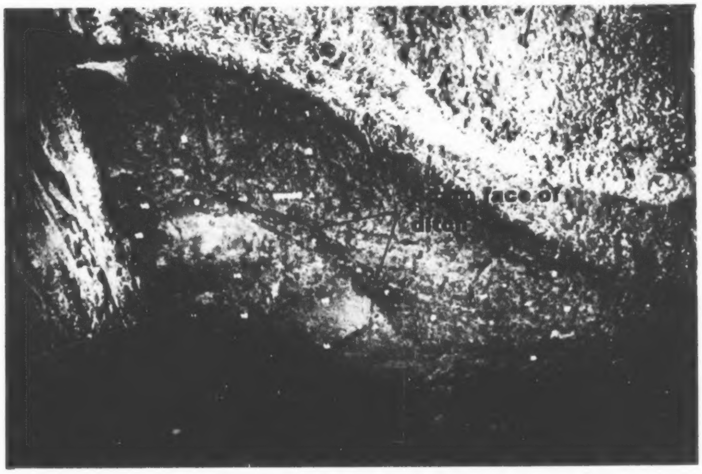

FIGURE 4: Scarp face of first fort ditch. Note how its slope mirrors that of the present, reconstructed ditch. Photo by J. Last. Parks Canada, Ontario Service Centre (Cornwall). Photo no. 19J-62W.

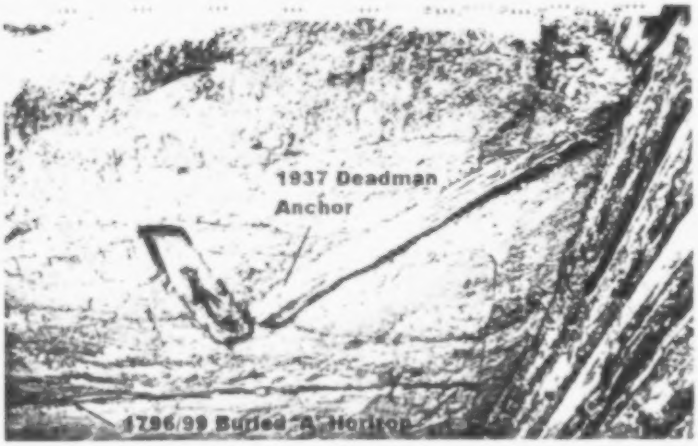
1937 Deadman Anchor
1796/99 Buried 'A' Horizon

FIGURE 3: East profile of unit 19H53A showing intact remains of the 1796/99 buried 'A' Horizon. One of the structural braces or deadman used to anchor the present 1937 palisade is also evident. Photo by E. Last. Parks Canada, Ontario Service Centre (Cornwall). Photo no. 19H44W.

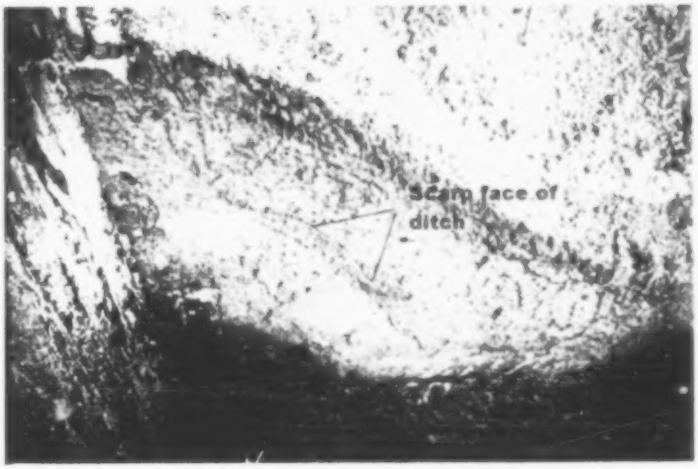
Scarp face of ditch

FIGURE 4: Scarp face of first fort ditch. Note how its slope mirrors that of the present, reconstructed ditch. Photo by E Last. Parks Canada, Ontario Service Centre (Cornwall). Photo no. 19H62W.

PHASE 3: RECONSTRUCTION AND MODERN OCCUPATION

The impact from the 1937 reconstruction was clearly evident within all of the excavated units. The degree of disturbance was quite marked between the interior and exterior trenches to the extent that there is little correlation between events that occurred on either side of the 1937 palisade.

Within the interior trench, 19H55A, reconstruction period fill deposits, as much as one metre in depth, had been applied to the former slope in the bastion to achieve the relatively level gradient seen today. These deposits were merely applied to the 1937 sod surface without causing any disturbance to the underlying stratigraphy.

By contrast, exterior units 19H55B and 19H55C bore evidence of the strategy of machine removal and subsequent backfill/contouring employed during the 1937 reconstruction of the earthworks. This was particularly evident within 19H55C, where little of the historic deposits survived the construction of the southeast bastion and palisade ditches. The 1796 sod surface and the underlying 'B' Horizon survived only as a small metre long segment adjacent to the 1937 palisade (Figure 5). A small isolated portion of the 'B' Horizon also remained within the west profile, but only at the extreme south end of the unit. This indicates the extent to which soils in this area had been mechanically cut away to the north and to the east to initially define the palisade and Southeast Bastion ditches. The shaping and contouring of the ditches and the glacis in this area was then completed with the application of a series of light brown fill deposits and then dressed with topsoil and sod.

Results from trench 19H55D indicated the historic deposits in this area survived somewhat better than those in 19H55C. The construction of the present ditch left the scarp face and base of a presumably similar ditch feature relatively undisturbed. The counterscarp of this ditch and presumably any glacis development associated with it had also been completely removed. The shaping and contouring of the reconstructed ditch was then achieved by the application of four fill deposits in the same manner as that seen

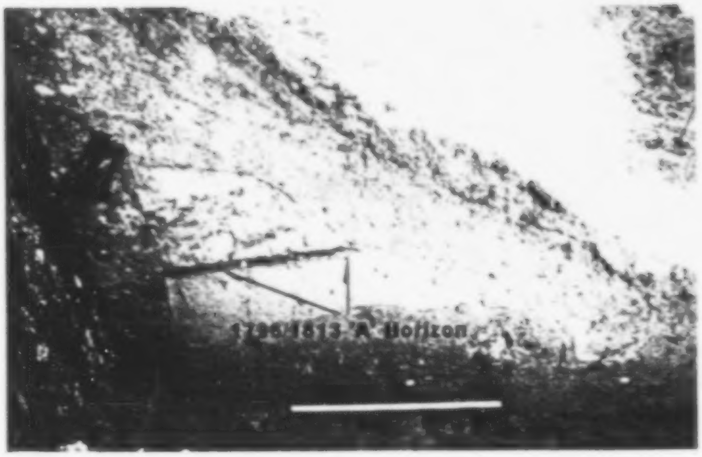

FIGURE 5: View of east profile of unit 19H55C showing remains of the 1796/1813 buried 'A' Horizon. Photo by J. Last, Parks Canada, Ontario Service Centre (Cornwall). Photo no. 19H-75W.

PHASE 3: RECONSTRUCTION AND MODERN OCCUPATION

The impact from the 1937 reconstruction was clearly evident within all of the excavated units. The degree of disturbance was quite marked between the interior and exterior trenches to the extent that there is little correlation between events that occurred on either side of the 1937 palisade.

Within the interior trench, 19H53A, reconstruction period fill deposits, as much as one metre in depth, had been applied to the former slope in this region to achieve the relatively level gradient seen today. These deposits were merely applied to the 1937 sod surface without creating any disturbance to the underlying stratigraphy.

By contrast exterior units 19H53B and 19H53C bore evidence of the strategy of machine removal and subsequent backfill contouring employed during the 1937 reconstruction of the earthworks. This was particularly evident within 19H53C where little of the historic deposits survived the construction of the southeast bastion and palisade ditches. The 1796 sod surface and the underlying 'B' Horizon survived only as a small metre long segment adjacent to the 1937 palisade (Figure 5). A small isolated portion of the 'B' Horizon also remained within the west profile, but only at the extreme south end of the unit. This indicates the extent to which soils in this area had been mechanically cut away to the north and to the east to initially define the palisade and Southeast Bastion ditches. The shaping and contouring of the ditches and the glacis in this area was then completed with the application of a series of half a dozen fill deposits and then dressed with topsoil and sod.

Results from trench 19H53B indicated the historic deposits in this area survived somewhat better than those in 19H53C. The construction of the present ditch left the scarp face and base of a previously noted earlier ditch feature relatively undisturbed. The counterscarp of this ditch and presumably any glacis development associated with it had also been completely removed. The shaping and contouring of the reconstructed ditch was then achieved by the application of four fill deposits in the same manner as that seen

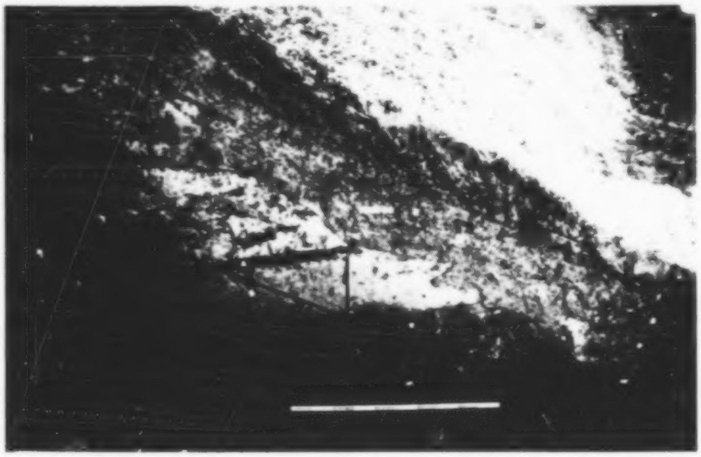

FIGURE 5: View of east profile of unit 19H53C showing remains of the 1796/1813 buried 'A' Horizon. Photo by J. Last. Parks Canada, Ontario Service Centre (Cornwall). Photo no. 19H-70W.

in 19H53C. The centre line of the 1937 ditch lays approximately one metre south of that of the earlier ditch.

The construction trench for the 1937 palisade was quite apparent within all excavated units. Within 19H53A, the top edge of this trench was observed to cut the 1937 sod surface. It was also found to have originally been excavated to a depth of 1.15 m; following the insertion of the logs, a further 0.80 m of fill was backfilled against them thereby increasing the depth of the palisade below present grade to approximately 2.0 metres. Additional structural support was also provided by a series of timber constructed deadmen that, thanks to ground subsidence, can be observed at the surface to alternate on each side of the palisade line at approximately 5.0 m intervals. Excavation units 19H53A and 19H53C each revealed one of these deadmen structures in profile (Figure 3). In both cases shallow "v" shaped cuts of approximately 0.50 m in depth had been excavated at the 1937 construction level to accommodate the base of the deadman. Once backfilled, additional fill was added, in the case of 19H53C, to create the scarp face of the present ditch, while in 19H53A, this fill also formed the firing step or banquette against the interior of the palisade.

The palisade observed in 19H53B was set against the south face of a trench cut that was too vertical to have been cut by hand unless the trench had been excavated from the fort interior. Given that the magazine gorge lies on the opposite side of the palisade from this unit, this may have been accomplished by machine during the shaping of the gorge itself.

CONCLUSIONS

Somewhat surprisingly, evidence of an earlier palisade eluded detection within all of the test trenches excavated during this study. This is not to say that a palisade did not exist, insufficient archaeological evidence exists at this point to make that assumption. Moreover, the weight of historical documentary and cartographic evidence clearly argues against such a conclusion, not to mention early nineteenth century fortification fundamentals.

The possibility that the 1937 palisade was superimposed precisely over the original line would, if it could be proved, rank as a miraculous occurrence, particularly over a trace as large as that at Fort George. Previous archaeological research within the interior has demonstrated the superpositioning of original with reconstructed buildings has been close, but never to the degree of accuracy the construction of the 1937 palisade would have required to completely obliterate all evidence of the original (Wilson and Southwood 1976).

The absence of evidence of the original palisade within the interior study area (unit 19H53A) suggests the present palisade lay to the north of the original. This raised hopes for its recovery on the opposite side of the palisade within trench 19H53C. Unfortunately, the observed impact of the 1937 reconstruction within this unit removed any possibility of confirming this idea. Extending the excavation of this unit further to the south seemed fruitless not only because of the extensive disturbance anticipated with the construction of glacis in this area, but also because it would have placed the palisade too far to the south relative to the flank of the reconstructed south east bastion.

The ditch feature revealed within 19H53B can be safely attributed to the 1796/1812 period although whether it was a product of the pre-war British fortification modifications can not as yet be determined. The diagnostic content of the artifact assemblage derived from this fill was certainly consistent with the first fort period.

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